Clinical Lectures
ON
CASES OF DIFFICULT DIAGNOSIS.

By SAMUEL FENWICK, M.D., F.R.C.P.,
PHYSICIAN TO THE LONDON HOSPITAL.

LECTURE II.
STRICTURE OF THE ILEO-CÆCAL VALVE.

GENTLEMEN,—At our last meeting we were considering the subject of perforation of the vermiform appendage; and we found that by a careful consideration of its symptoms, and the physical signs accompanying it, the existence of the complaint could be generally diagnosed. I now wish to draw your attention to another disease of the cæcum that is more difficult of recognition. The cases are often so obscure that I have not ventured upon an exact diagnosis in any of those that have come under my own notice, but have had to content myself with the opinion that there was a stricture in some part of the intestinal canal. It will, however, be evident that, unless we can satisfy ourselves as to the position as well as the nature of the disease in a case of this kind, the treatment must be vague and uncertain. I will first read to you the cases to which I have referred, and you will see at once how greatly they differ from each other in their history, in their clinical aspects, and in the cause of the obstruction discovered after death.

CASE 1.—Sarah J——, aged twenty-nine, admitted into the London Hospital on November 6th, 1874. She complains of a fixed pain near the umbilicus, coming on directly after food. She has no vomiting and no heartburn, but suffers from slight acidity and excessive flatulence. Tongue rather dry, thirst, bowels much confined, and only act with the assistance of aperients; pulse 84. She has latterly lost flesh. Catamenia have not appeared for seven weeks. The abdomen is greatly distended and is divided into longitudinal ridges, which are continually altering their position, their motions being very apparent. There is no tenderness on pressure. The uterus is normal, and no cause for intestinal obstruction can be discovered by vaginal examination. The percussion note is very tympanitic in every part, but the left side is more prominent and more clearly tympanitic than the right. After drinking no gurgle can be detected in the stomach by auscultatory percussion. She states that she had always enjoyed good health until three months ago, when she was suddenly attacked with severe pain near the umbilicus, accompanied by diarrhœa. This attack lasted eight days, and ever since that time she has suffered from attacks of pain of the abdomen, which are increased by exercise as well as by food, and from occasional vomiting, which chiefly comes on in the evenings.—Dec. 24th: The vomiting has ceased since her admission, but she still complains of pain at the umbilicus, coming on a short time after food. The bowels now act regularly with the aid of enemata. The movements of the intestines have become more visible and are very well marked.—January 8th, 1875: The pains are now much more severe than formerly, and the whole of the front of the abdomen seems to be occupied by a mass of moving intestinal coils. She had vomited a large quantity of pure bilious fluid mixed with mucus. Pulse 120, small and feeble. She died rather suddenly, without any alteration either in her symptoms or in the physical signs.

Post-mortem examination.—The small intestines were found to be enormously distended, especially the ileum; they contained a dark-coloured fluid; their walls were much thickened and numerous hæmorrhages were found in the submucous coat; the ileo-cæcal valve was much contracted, but numerous small openings existed in its place between the small and larger intestines; some solid fæces were in the ascending colon; the descending colon was much contracted. The other organs of the body were in a healthy state.

CASE 2.—Fanny F——, aged twenty-seven, admitted August 24th, 1877. She complains of severe pain of the abdomen, coming on in paroxysms, attended with occasional vomiting; the pulse is 100 the tongue furred; appetite bad; temperature 100°; the bowels have been confined for two weeks. The abdomen is much distended and tympanitic; no dulness can be discovered in any part, but there is increased tension and resistance to pressure in the right iliac region, although no tumour can be felt there. The motions of the intestines are visible over the whole abdomen; they are constantly present, but seem to be most distinct in the umbilical region. Catamenia irregular. On examination by the rectum, a round, hard mass can be felt, apparently in Douglas's pouch, and the uterus seems to project forward. She gives a very confused account of her illness; but as far as can be learned from her, she had four years ago suffered from what she calls a "miscarriage," and the child came away in pieces, during a period of five months. After this she suffered for two years from severe pains of the abdomen, which came on at intervals. These paroxysms of pain then left her, but two months ago she was again attacked with severe pain in the bowels, accompanied by a hard swelling and a feeling of movement in the abdomen, and with vomiting. After her admission the bowels were freely opened by enemata, and a large quantity of brown-coloured fæcal matter was evacuated.—28th: The liver dulness extended from the upper border of the fourth rib to the upper border of the seventh, and some dulness was found in the right flank. The patient was examined under chloroform, and a small, rounded, hard swelling was discovered in the recto-uterine pouch. A copious enema was thrown up above the tumour, but it was not retained. The temperature rose to 102°, but no pain was complained of.—29th: The patient seemed to be somewhat relieved, but she suddenly became collapsed when straining at stool, and vomited some fæcal-looking fluid. She died the same evening.

Post-mortem examination.—Many of the coils of the intestines were adherent, and a communication existed between the cæcum and a portion of the small intestine adherent to it, whilst the sigmoid flexure was adherent to the rectum, and a communication also existed between them. The lower end of the ileum was much dilated and hypertrophied, and the ileo-cæcal valve was contracted to the size of a swan's quill. There was a cyst connected with the left Fallopian tube, and a fœtal parietal bone is also mentioned in the notes; but its exact situation is very difficult to make out, as in one account it is stated to have been situated in the sigmoid flexure, in the other in the cyst.

CASE 3.—James G——, aged forty, admitted June 6th, 1883, complaining of pain in the abdomen of a paroxysmal character, coming on every three or four minutes, and attended with vomiting of all food. The pain is so severe that it prevents him from sleeping, and he cannot lie in any position very long. The bowels have not been moved for nine days. Pulse 92; temperature 99·6°. The abdomen is slightly tense and painful on pressure, and the movements of the intestines are very visible; no tumour can be felt, but there seems to be more fulness to the left than to the right of the spine, and the percussion note is rather duller there. The rectum is large, and no stricture can be discovered. Large enemata were employed, but no stool was obtained. He had resided in Assam for seven years, and had visited various parts in India, but had generally enjoyed good health. He contracted syphilis twenty years ago, had malarial fever and ague some years ago, and had suffered from slight attacks occasionally since then. He first felt griping pains in the abdomen about one month since, and took aperient medicines, which produced purging, but did not relieve the pain. During the last month he has taken purgatives about half a dozen times, the last three times with little or no effect. On the last occasion (June 5th) it produced pain and uneasiness with nausea, and about seven or eight hours afterwards he vomited, and continued to do so at short intervals for many hours. He has at present a sore on the leg, apparently syphilitic, which has been unhealed for the last four years.—11th: He was carefully examined under chloroform, but no stricture could be discovered. He describes the pain as commencing at the level of the umbilicus, and then passing down each side, each access of pain being attended with great rumbling of wind.—13th: He has had two slight stools to-day; the first was liquid, the second solid, but of small size; the abdomen is not so tense, and is not tender on pressure.—15th: He seems easier, the pain coming on at intervals of about one hour, but relieved by change in his position. The abdomen is less distended, and there is dulness over the cæcum and ascending colon. The movements of the intestinal coils are

very apparent. He varied from this date, the pain and vomiting being one day easier, another day more severe. The operation of colotomy was first performed, but the colon being found contracted the small intestine was opened, with the result of giving vent to a large quantity of liquid fæces. He was greatly relieved, but some colicky pains still continued, and he was attacked with pneumonia on July 1st, of which he died on July 6th.

Post-mortem examination.—There were some old peritoneal adhesions in the pelvis; the ileo-cæcal valve was much contracted, and only admitted the point of the forefinger; there was some thickening of the ileum near the valve with a semilunar ulceration, and a little further along the ileum was a raised patch with ulceration. The other organs were healthy.

The three cases I have just quoted are the only instances of this disease that have fallen under my own notice, or at any rate they are the only ones in which stricture of the ileo-cæcal valve was proved to be present by post-mortem examination. I have only been able to discover one other in the post-mortem records of the hospital, and no history of the case can be found. The account merely states that a sailor, forty-five years of age, died in July, 1851, and the ileo-cæcal valve was obstructed by a scirrhous growth completely surrounding the intestine and leaving an aperture through which only a crowquill could be passed. The large intestine was contracted; the small intestines were distended with fluid and flatus, they were of a dark-slate-colour and much congested, and the muscular coat was thickened. Cases of cancer of the cæcum are recorded, but as there is no mention of stricture of the valve these cannot be taken into the account. In an admirable paper on Intestinal Obstruction by Dr. Hilton Fagge twenty-two cases of intestinal obstruction are quoted as having occurred at Guy's Hospital from January, 1854, to November, 1868, and only one is mentioned in which the cæcum and ileum were the seats of stricture, the former intestine "being puckered by scar-like patches of cancer on the peritoneal coat," but no mention is made of any stricture of the valve. M. Duchaussoy collected twenty-seven cases of stricture of the intestines, in only one of which the cæcum was the seat of disease, but no mention is made of the state of the ileo-cæcal valve. I have, however, been able to collect twenty-six cases of stricture of this valve, recorded by various authors; and although in many the details both of the morbid conditions and of the symptoms during life are very meagre, they will, I hope, furnish materials that may assist us in our study of this rare form of disease.

You will remark that, although the cases I have quoted all showed a contraction of the ileo-cæcal value, there was a considerable difference in the morbid conditions associated with it. Let us look, for instance, at Case 1; in it, although the valve is described as obstructed, there is no mention of any disease of the intestines or of the adjoining structures, and it is stated that a number of small openings in the site of the valve existed between the ileum and the cæcum. In the catalogue of the Dupuytren Museum, in Paris, a similar case is described, in which at the contracted part there were a number of bridles crossing the opening, and thus affording the appearance of a sieve. It is suggested by the writer of the catalogue that the stricture had originated in an intussusceptum, and that the bridles were the remains of small portions of the included intestine that had escaped the sloughing process. This was, in all probability, also the origin of the contraction present in Case 1; for you will remember that the patient referred the commencement of her complaint to an illness which lasted for eight days, and had commenced suddenly with severe pain near the umbilicus, accompanied by diarrhœa. The objection will probably occur to you that females who were the subjects of both of these cases are more rarely affected by this form of invagination than the other sex; but if you bear in mind the sudden nature of the attack, occurring in a person who had been always previously in good health, the length of the primary illness, the gradual development of the symptoms after it, and the peculiarity of the morbid appearances found after death, you can have but little doubt that this explanation of the case is correct.

When we last met we were considering the abscesses near the cæcum produced by ulceration of the vermiform appendix, and you might reasonably suppose that a contraction of the ileo-cæcal valve would often result from such a condition. This is, however, not the case, for I have only been able to find one example of the kind, which is recorded by Dr. Hensinger. The patient had eleven years before her death suffered from an attack of perityphlitis; and on post-mortem examination the ileo-cæcal valve was found to be completely closed, the communication between the small intestine and the cæcum being maintained by three fistulæ, which passed from one to the other through thickened tissue, the remains of an old abscess around the cæcum. The rarity of this termination of perityphlitis may be explained by the fact that most of such cases end fatally within a short period, and that when life is prolonged for many weeks the abscess is discharged, either through some of the neighbouring organs or by the pus making its way to the surface of the body.

In eight cases out of twenty-six the ileo-cæcal valve is stated to have been contracted, and in six it is recorded as contracted and indurated, without any mention being made of a malignant growth accompanying it; so that in more than half of the whole number the morbid change seems to have been due to chronic inflammation alone. In one instance, recorded by Dr. Wickham Legg, the contraction was believed to have been congenital, for the patient had suffered from severe attacks of colic since the age of five, and a large number of cherry-stones were discovered above the stricture. It was suggested by Schroeder van der Kolk, in a case that came under his observation, that the stricture might have originated from ulceration produced by the impaction of a foreign body; but this must be a very rare cause, as I have been unable to find any history of a previous intestinal obstruction, either in the cases that have occurred in this hospital or in those recorded by other observers. But it has been frequently remarked that the cæcum was also thickened, and when we remember how frequently this portion of the intestinal tube suffers from inflammation, we should feel surprise that the valve is not more commonly the seat of stricture. It is not uncommon to find tubercular and typhoid ulcerations on the mucous membrane of the ileo-cæcal valve, and it is strange that such lesions do not more frequently lead to permanent narrowings; but I am strongly inclined to suspect that a moderate amount of stricture is more common than is supposed, and that it is often overlooked on account of the absence of symptoms during the life of the patient.

Let us now turn our attention to the third case, where there was thickening and ulceration of the mucous membrane at the lower part of the ileum, in addition to the stricture of the valve. This man had suffered from syphilis, and had an ulcer of the leg, apparently syphilitic, at the time of his admission. A very similar case is recorded by Dr. Bartels, in whom, although the patient denied ever having had syphilis, there was found after death contraction of the ileo-cæcal valve and extensive ulcerations of the cæcum and small intestines, and also indurations in the lungs, which were considered as decidedly syphilitic. Now, these cases are of great interest, not merely as showing that ileo-cæcal stricture may be the result of inflammation of the neighbouring intestines, but also as pointing to syphilis as the probable cause of the local mischief. The very striking cachexia so often accompanying syphilis is scarcely to be explained by the lesions we are accustomed to find after death; but, if it could be proved that the secreting and absorbing surfaces of the gastro-intestinal tract are as often the seat of mischief as the skin and mucous membrane of the mouth, we should make a considerable advance in our knowledge of the effects produced by this malady. That this must often occur I am fully convinced, for I have seen most obstinate cases of gastric ulceration and of dyspepsia following syphilis which have quickly yielded to the use of iodide of potash and other remedies of a similar character. In order, however, to discover the presence of such changes, after death, it would be necessary to employ careful microscopical investigation, for important alterations are often present in the mucous membranes without producing any alterations that can be recognised by the naked eye. In nine out of twenty-six cases the stricture is stated to have been produced by cancer, and in two of these the cæcum was also affected. I would here draw your attention to the extreme rarity with which primary carcinoma affects the cæcum, as compared with the frequency of its presence in the stomach, colon, and rectum; for any theory that may be brought forward to account for the origin of this malady must take into consideration its predilection for certain parts of the gastro-intestinal tube as compared with others.

As might be supposed, inasmuch as strictures of the

ileo-cæcal valve are produced by different agencies, the amount of obstruction greatly varies. Thus in five cases the little finger could be barely passed through the valve; in one this could not be effected; in another the opening was only one quarter of an inch in diameter; in five it only admitted a quill, and in one a needle; in one it was almost completely closed, and in four no opening at all could be discovered. Of course the effects of the constriction also vary, for wherever it was very narrow the small intestines were found to be vastly distended with fluid, the muscular coat of the ileum was hypertrophied, and the results of vascular congestion were seen either in recent extravasations of blood or in the slate colour of the walls of the gut; the colon was usually contracted, although in many cases it contained a small amount of fæces. In Case 2 adhesions were found between a coil of the small intestine and the cæcum and between the sigmoid flexure and the rectum, and communications had been established between these portions of the intestinal canal, so that the effects of the distension must have been considerably lessened. I have found three other cases on record in which a similar process had taken place; in one a communication had been established through the appendix vermiformis, which was much dilated, and was adherent to the ileum; in the others intestinal fistulæ had been established between the small and large intestines. Old adhesions have been often met with, and are probably the results, as in Cases 2 and 3, of a previous attack of local peritonitis, or of inflammation excited by the great distension to which the gut had been subjected.

(To be concluded.)

Remarks ON LARYNGEAL PARALYSIS AND INEQUALITY OF THE PUPILS, AS TENDING TO AID AND ALSO TO MISLEAD IN THE DIAGNOSIS OF THORACIC ANEURYSM;

WITH SOME OBSERVATIONS ON THE

STATE OF THE PUPIL AFTER DEATH AND THE EFFECT OF ATROPINE.

BY JAMES FINLAYSON, M.D.,

PHYSICIAN AND LECTURER ON CLINICAL MEDICINE, GLASGOW WESTERN INFIRMARY, PHYSICIAN TO THE GLASGOW HOSPITAL FOR SICK CHILDREN, ETC.

THE occurrence of laryngeal symptoms, and particularly of laryngeal paralysis, as also the appearance of inequality in the pupils, have been known for many years as affording important evidence of the presence of aneurysmal and other thoracic tumours. Two patients who were in my wards at the same time afforded illustrations of the value of these signs, and also of the danger of trusting too much to their significance.

In the one case we had a well-marked pulsating tumour in the upper part of the chest, extending into the right side of the neck. The history of the case went back for more than a year. The examination after death showed that the aorta was dilated and that a large aneurysm arose from the arch in front of the origin of the great vessels. The pneumogastric and recurrent nerves on the right side were found considerably stretched over the tumour, and somewhat adherent to its wall. An attempt was made to include the sympathetic in the dissection of the parts removed; but although it was evident from the position of the tumour that it must have been implicated, it was found that it had been partially destroyed in removing the aneurysm and its connexions. The laryngeal symptoms had appeared three months before death; and on admission the right vocal cord was found to be paralysed. During his stay in the ward (six or seven weeks) the dyspnœa was often extreme, and he had had several attacks, almost fatal in character, due to spasm of the glottis, terminating with a crowing inspiration. These attacks were aggravated by the growth of the tumour leading, a few days before death, to displacement of the larynx and trachea to the left of the middle line. The only point in this part of the history worthy of note is that the tumour and paralysis were on the right side. It would seem from the statements of authors that this symptom is much commoner when the tumour is on the left side. The state of the pupils was noted particularly on admission; they were quite equal. Their size was measured by means of the scale enclosed in Nettleship's pocket case, the round black spots in which are numbered so as to express the diameter in millimetres. Both pupils when shaded were 7½ mm.; when exposed to bright light, 4½ mm. On being measured again, three weeks before death, when a marked inequality had appeared, the figures were: right pupil when shaded, 4½ mm.; when exposed to light, 4 mm.; left pupil when shaded, 6½ mm.; when exposed to light, 5 mm. This inequality persisted to the end of the case, and was frequently verified as essentially the same in degree. The exact condition at the moment of death was not noted, but at the post-mortem examination, thirty-six hours later, I found both pupils dilated and quite equal. This dilated and equal condition of the pupils after death, where myosis dependent upon aneurysm was present during life, was noticed in the earliest cases recorded of this symptom.[1] This condition of the pupils after death in cases of paralysis from aneurysm is just what might be anticipated; for such tumours do not usually destroy the nerves implicated, and so when relief to the aneurysmal pressure occurs at the time of death the paralytic condition might pass away at the end; and, further, after death the sphincter of the pupil, like other muscles, becomes no doubt relaxed; and so the condition of the pupil should not be different from what is observed in other cases immediately after death occurs. Some observations have been made in my wards on this point, for which I am indebted to the sister of my wards, on whose care in such a matter full reliance can be placed; and although not sufficiently numerous to warrant an authoritative statement on the subject, I may say that if observed *immediately* after death, the pupils were usually found moderately dilated, or sometimes even very markedly so, from 6½ mm. to 8½ mm. being common; none were noted under 5 mm., and once even 10 mm. was found. No doubt the influence of age, the nature of the illness, and other conditions affect the state of the pupils at the time of death. But on pursuing the inquiry after the removal of the body to the dead-house, my assistant, Dr. Williams, and I found that the pupils often changed their size shortly after death, and speaking only from a few cases, I believe there is a marked tendency towards contraction, so that in a young child the reduction found was from 7½ mm. to 4 mm. within sixteen hours, some distinct diminution in size being found in various other cases. In the case of a person recently dead, the influence of atropine in causing very marked dilatation of the pupil is readily shown[2] by putting a few drops of a strong solution of atropine into one eye and none into the other, when a comparison can be made in an hour or two. Sometimes the effect of the atropine appears just to be sufficient to neutralise the tendency to contraction as manifested in the diminution of the other pupil. Even when put in immediately after death, we did not see the *extreme* dilatation so often produced by strong applications during life. If some hours be allowed to elapse after death before atropine is added, the effect is less pronounced; and it seemed as if after four or six[3] hours the susceptibility to atropine was almost lost. The atropine, however, may continue to act even after well-marked rigor mortis has been established. This was a point to which I directed attention, as it seemed to me that the progressive contraction of the pupil after death was concurrent with, and might be dependent on, the development of rigor mortis. Even, however, when the action of the atropine is well marked on the dead eye, its influence is short-lived. This may account for its not producing the extreme dilatation so often seen during life. Within a few hours of its production, say

[1] Dr. W. T. Gairdner, Clinical Medicine, Edin., 1862, p. 534. The case was observed in 1855. See also a case observed by Dr. Walshe in 1853, mentioned in a footnote to his Diseases of the Heart, 4th edition, London, 1873, p. 606.

[2] Curiously enough, the effect of the instillation of atropine has actually been proposed as a test of death (!), but the dilatation of the pupil in dead eyes, and even in those which have been removed, seems to be well known. See Dr. Argyll Robertson's interesting paper in the Edin. Med. Journal, Feb. 1869, vol. xiv., p. 709.

[3] This I find is the average time named by Maschka, within which marked post-mortem changes can be recognised in the eye. Handbuch der gerichtlichen Medicin, Band iii., S. 306. Tubingen, 1881-82.

twenty-four hours after death, we usually found the dilated pupil had become reduced to the size of the other; this of course presents a strong contrast to the persistence of the dilatation of the pupil for some days with which we are familiar during life. These facts are of course open to various interpretations, but they seem to me, particularly the one last mentioned, to lend some support to the theory of the dilatation of the pupil from atropine being due not only to its paralysing the sphincter, but also to a direct stimulation of the dilator of the pupil.[4]

In leaving this interesting subject, I may say that I am aware that my observations are too few to warrant a conclusive statement of the case, and as my opportunities for following up such an inquiry are not likely to enable me to do so myself I have requested one of my former assistants to study the behaviour of the pupil after death, and he has already made some progress in the inquiry.

In the second case, where the signs of laryngeal paralysis and inequality of the pupils helped to mislead us, there were very obvious signs and symptoms of cardiac disease, great dyspnœa, enlargement of the heart, and a double murmur, audible down the sternum. But there was also evidence of dilated aorta, as shown by an area of undue dulness on percussion extending from the upper boundary of the heart towards the right sterno-clavicular articulation, and also by an undue pulsation in the jugular fossa. Moreover, we had at times a very distinct sense of impulse immediately under the left clavicle. There was also substernal pain, and this extended down the left arm, but there was no swelling. The pulses were throughout quite equal, and the tracings had a well-marked aortic regurgitant character. Frequently, also, we had, from the time of admission, a slight inequality of the pupils; this was not persistent, but when present the left pupil was always the larger of the two. These facts led me to suspect, almost from the first, the presence of an aneurysm occupying chiefly the descending part of the arch of the aorta, acting on the sympathetic by causing irritation and so leading to dilatation of the left pupil. The patient, a man of forty-two years, had an old history of rheumatism, but not of syphilis. The total duration of his illness from first to last was fully two years; he was in the wards on three separate occasions, and the observation of the case extended over a period of thirteen months, during the whole of which time the suspicion of aneurysm was entertained. The symptoms varied in degree, but remained much the same in kind. Repeatedly pain and friction in the left side indicated the presence of a pleurisy: towards the end of the case a little dropsy, with slight albuminuria, supervened; and the termination was marked by hæmoptysis lasting a few days. The physical signs always pointed to an enlarged aorta, but there was no pulsation over this area, and the pulsation felt under the left clavicle on the first admission ceased to be perceptible; the pulsation in the jugular notch became much less, and the murmurs shifted their position of maximum intensity, so that the diastolic murmur was heard best to the left of the cardiac dulness instead of over the sternum, as before. The pupils continued all through the three residences to show at times a slight inequality, the left being the larger. With these changes in the physical signs, without anything more than a temporary amelioration, the idea of aneurysm was still entertained, and it was supposed that it might have grown downward or backward, so as to remove it from, rather than approximate it to, the surface within reach. The lungs remained tolerably free from signs of any serious change; there had been the repeated pleurisy on the left side, there were frequently some bronchial râles, and towards the end the left lung seemed more implicated. No marked dulness and no great enfeeblement of the respiration were detected. About two months before death the patient thought he had contracted a cold, and there was more cough. This was noticed to have a laryngeal quality, and after the first violence of the cough subsided a laryngoscopic examination showed the left vocal cord to be paralysed. The larynx had been examined soon after his first admission, and found normal. This new symptom, still pointing to the left side, seemed to remove all the hesitation naturally felt up to this point in the diagnosis of aneurysm; this was now regarded as well established. The laryngeal symptoms persisted to the end, but examination of the parts by the mirror was only practised twice or thrice, owing to his weak condition.

[4] This opinion as to the action of atropine on the living eye is supported by the authority of von Graefe. See Dr. Argyll Robertson's paper already quoted, Edin. Med. Journal, vol. xiv., p. 705.

The post-mortem examination was made by Dr. Newman. The aneurysm so confidently looked for on the left side did not exist, there was, indeed, a dilated aorta, and even the beginning of a small pouching towards the right side just above the valves; this might, no doubt, have developed into a regular aneurysm, if the patient had lived, but it had evidently nothing to do with the laryngeal paralysis on the left side. The aortic valves were quite incompetent, much diseased, and very hard and calcareous; this no doubt accounted for the murmurs; the heart was enormously enlarged. The cause of the left-sided laryngeal paralysis seemed to be due to the state of the left lung, which was found adherent and of a brownish colour; it had the appearance of being compressed and shrunken. The recurrent laryngeal nerve was found to pass through a mass of enlarged glands, just at the arch of the aorta. These existed at the root of the left lung and in the posterior mediastinum. They were of a brownish colour, like the left lung itself, but were not hard. The larynx was somewhat congested.

The explanation of the laryngeal paralysis seemed to depend on the dragging downwards of the left recurrent nerve, due to the greatly enlarged heart, and favoured by the shrunken left lung; and this downward displacement might account for the lessened pulsation in the jugular fossa and under the left clavicle, as the case went on. The implication of the recurrent nerve in the glands cannot be wholly set aside, although their softness would no doubt lessen the chance of their causing irritation, or at least of producing paralysis. The inequality of the pupils was not of the degree or of the kind to warrant much stress being laid upon it, and may fairly be set down as an accidental occurrence, although when it concurred with laryngeal paralysis it was somewhat misleading.

The explanation of the laryngeal paralysis on the left side suggested above was the only plausible method of accounting for this misleading symptom which we could think of at the post-mortem examination. I did not then know that such a cause of laryngeal paralysis was actually recognised; but on mentioning the case at the time it occurred to Dr. John McIntyre, one of my former pupils, who has now devoted himself to laryngology, he told me that in the Vienna cliniques this view seemed to be so well recognised that the diagnosis of such a condition was frequently discussed at the examination of patients. I have not been able to lay my hand on any published statements on the subject, although I believe such records do exist. We must, therefore, bear in mind that the occurrence of laryngeal paralysis on one side, in the course of a case with symptoms pointing to the chest and strongly suggestive of aneurysm, does not necessarily imply the existence of aneurysmal disease or of thoracic tumour.

A COMBINED ICE AND ETHER-SPRAY FREEZING MICROTOME.

BY WILLIAM RUTHERFORD, M.D., F.R.S.,
PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF EDINBURGH.

DURING the thirteen years that have elapsed since I invented the freezing microtome, the method of freezing has come into general use as an aid to microscopical research in physiology and pathology. It has also become of much service in aiding the practical study of these subjects, especially when they have to be taught to large numbers of students. The original ice and salt freezing microtome described by me in the *Journal of Anatomy and Physiology* for 1871, vol. v., was somewhat faulty. The improved form of the instrument (Fig. 2) described by me in THE LANCET, 1873, vol. ii., has been constantly used in my laboratory since that time. We have no difficulty in making with it from four to five hundred sections of the retina, kidney, or other organ, in the course of an hour. When large numbers of sections are required, it is, I think, always advisable to use a mixture of ice and salt as the freezing agent, on the ground of economy, and also because *large* pieces of tissue can be frozen quickly by it and kept frozen any length of time. We made a fair trial of the ice-freezing microtome devised by Williams and made by Swift of London, in the hope that its large freezing-box and method of regulating the thickness of the sections might

still further expedite the process of section making, but after a time we gladly returned to the use of my instrument, as more convenient and more reliable.

The first microtome in which ether spray was used as the freezing agent was invented by Dr. Bevan Lewis, and described in the *Journal of Anatomy and Physiology* for 1877, vol. xi. The principle of the ether-spray microtome is excellent when only a small number of sections are required, and the circumstance that the freezing agent is always at hand renders it very convenient; but it is not suitable when a thick piece of tissue is to be frozen and many sections made. I have found that even the modified ether-spray microtome described by Dr. Lewis in his work on the "Human Brain" (Churchill, 1882) leaves room for improvement. Eighteen months ago I added to my ice microtome an ether-spray apparatus for freezing, so that the instrument may be used as an ice microtome at one time and as an ether-spray microtome at another. (Fig. 1.) As the combined instrument is less costly than two separate instruments, and as the ether-spray arrangement differs in some particulars from any hitherto invented, I have thought that an account of it might help some of the readers of THE LANCET in carrying out their microscopical studies of normal and diseased tissue; and I may further help those who finished their medical studies before the further production of spray. The elastic pump can easily be connected with a sufficiently long piece of elastic tubing, and arranged on the floor in such a manner that, after the tissue is frozen, the freezing can be maintained by working the pump at intervals with the foot, thus leaving the hands free for the process of section-making. The zinc box on which the tissue is laid is insulated by vulcanite from the brass cylinder worked by the screw below it, and it is so made that, while ether is economised, a low temperature is obtained for a considerable time.

FIG. 1.

The microtome arranged for freezing with ether spray.

Use of the Microtome with Ice.—The glass plate (L) is unscrewed. The supports (M and M'), the tubes (T), the ether bottle and bellows, are removed; Z is unscrewed, and the plug (K) screwed in its place, and sunk deep in the well. The glass plate (L) is then screwed on the brass plate (B) and the instrument is ready for use (Fig. 2). Snow or finely pounded ice and salt are alternately placed in the freezing box (C) in small quantities, and stirred round the well with a piece of wood. A cork is placed in the tube (H) and removed only when the freezing box becomes full of water. Gum solution is poured into the well, and the tissue introduced, after a layer of ice has formed around the interior of the well, so that there may be no danger of any part of the tissue being without an envelope of frozen gum. The mouth of the well should then be covered with a thin sheet

FIG. 2.

The microtome arranged for freezing with ice and salt. (The glass plate screwed to the top of the instrument is not shown in the engraving.)

of gutta-percha, and a flat leaden weight placed on it. The whole instrument should then be enveloped in thick flannel, or some similar cloth, until the freezing is complete.

When arranged as shown in Fig. 2, the instrument can be used for the old method of embedding a tissue in melted paraffin and similar substances. In my laboratory the cutting of tissues by any but the freezing method has for years been abandoned in all cases excepting when sections are to be made without a machine. A great advantage resulting from the use of the method of freezing is that the embedding agent is readily got rid of by throwing and steeping in water for a time, leaving the most delicate tissues uninjured, and unencumbered by pieces of the embedding agent, as is the case when any embedding agent similar to paraffin is employed. Another important point is that the various methods for hardening the tissues so that microscopic slices of them may be sufficiently coherent for manipulation need not be pushed to the extent that was necessary when the tissue had to be cut embedded in paraffin. Consequently, finer preparations can now be obtained, and with an ease and certainty formerly unknown.

In making the sections with the above instrument the knife is pushed on the glass plate at a right angle across the well. I am aware that with this arrangement the knife does not remain sharp so long as is the case when it is not glided on any surface, but is supported at one or both ends of the blade by some framework. But I find it of great

freezing microtome was invented, by briefly giving the chief details that must be attended to in using the instrument.

Preparation of the Tissue. — As a rule, the tissues should be steeped in the usual hardening agents mentioned in the books for three weeks or a month before they are sliced in the microtome. The prepared tissue should then be cut into pieces of desirable size and shape, and if it has been immersed in alcohol, every trace of that reagent must be removed by placing it for about six hours in a large jar of water. It is then transferred to a thick solution of gum arabic (gum one part, water two parts), in which it is left over-night, so that the tissue may be thoroughly permeated by the gum, to prevent it from becoming crystalline when frozen.

Use of the Microtome with Ether Spray.—The instrument is arranged as shown in Fig. 1. The tissue, which should not be more than a third of an inch thick, is laid on the roof of a zinc box (Z) and covered with gum. Ether, which must be anhydrous, is then blown from the bottle (O) by the elastic bellows (N) against the lower surface of the zinc plate. The condensed ether flows down through the tube (F), and is collected in a vessel. The spray-producing tubes (T) can be readily pulled out of the slot under Z for examination. The tissue is soon frozen, and it remains frozen for about five minutes in a cool room, without any

advantage to have the knife held in the hand, so that it may be readily lifted and the sections quickly brushed with a goat's-hair brush into a basin of water, or, as in the case of the embryo, quickly drawn one by one from the knife laid flat upon a glass slip. Each section can thus be readily floated from the knife into a pool of water on the glass slip, so that every part of it is kept *in situ*. This ready handling of the sections in the mass or singly is impossible with the microtomes devised by Williams and Roy. Commonly the sections are brushed from the knife into a large jar of water, into which the gum diffuses from them. At the end of half an hour or so they are collected with a straight needle in small numbers at a time, and transferred to a second jar of water, in which they are left for the same time. They are then transferred to a third jar, and at the end of half an hour they are transferred in the same way to a stoppered bottle containing methylated spirit, in which they are kept till required for staining and mounting.

The indicator (E, Fig. 1), though useful to the beginner in helping him to make sections of uniform thickness, is soon abandoned, as the manipulator soon learns to regulate the extent of the screw's motion by his sensation. The knife suitable for my instrument requires to be specially made. Both instrument and knife are made by Gardner, instrument maker, South Bridge, Edinburgh.

AN EXAMINATION OF THE SUPPOSED ACTION EXERTED BY THE ANTAGONISM BETWEEN ACIDS AND ALKALIES IN MODIFYING THE TONICITY OF THE HEART AND ARTERIES.

BY SYDNEY RINGER, M.D., F.R.C.P.,
PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, LONDON;
AND
DUDLEY BUXTON, M.D., M.R.C.P.,
ASSISTANT TO THE PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, LONDON.

THERE are two forms of muscular contractility which are called into play during the functional activity of the heart and arteries: the one form is quick, of brief duration; while the other is persistent. This latter form is designated the tonicity of the heart muscle and arterial muscles. Although occurring in the same structure, these forms of contractility offer differences alike in nature and function. It is not our purpose at present to attempt to consider in what directions these differences in nature lie, or to attempt to analyse the mechanism of rhythm. In function, while the quick rhythmic contraction subserves the purpose of propelling the blood, the slow persistent contractility determines the actual capacity of the heart and vessels. Both forms of contractility are influenced by central and peripheral conditions. Thus the arteries can be contracted or dilated by central vaso-motor influences. Again, the arteries are subject to local or peripheral influences, which act either through a hypothetical vaso-motor controlling system situated in the vascular walls, or directly, as by the action of the circulating medium upon the muscular walls of the containing vessels.

Dr. Gaskell has shown[1] that acids and alkalies, when allowed to circulate in contact with the interior of the heart and arteries, exercise powerful influence upon their tonicity. His experiments are briefly as follows. To ascertain the action of dilute alkaline solutions upon the cardiac muscle, the frog's heart was removed from the body and fixed upon a perfusion cannula. To record the beat and obtain circulation through the heart, Roy's tonometer was used. Normal saline—i.e., 75 per cent. of sodium chloride—was sent through the heart, and caustic soda was then added to the circulating fluid until it was of the strength of 1 in 20,000 salt solution. The heart very slowly and very steadily passed into systole—i.e., a condition of marked tonicity. A similar result followed when the same strength of caustic soda was added to artificial blood solution. Dr. Gaskell says:—"It is clear, then, from these two sets of experiments that a dilute alkaline solution acts upon the muscular tissue of the heart in such a way as to bring it from a position of relaxation to one of contraction, and that, according to the stage in this alteration of the contractile tissue, so will be the nature of the beat produced by the ventricle; the more the muscle is drawn together by the action of the alkali, the longer is the time of full contraction in each beat, meaning by the term full contraction the complete closure of the ventricular cavity." The next series of experiments, conducted on precisely similar lines, showed that were an acid—lactic acid, 1 in 20,000—used instead of the caustic soda, that the heart rapidly stopped, remaining in diastole. "The effect, in fact, is exactly the reverse to what took place with the alkaline solution." Dr. Gaskell then undertakes to show that the actions upon the heart of acid and alkali solutions are antagonistic. A heart brought to rest in systole by an alkali was completely relaxed by an acid from a condition of full contraction to one of extreme dilatation. The reverse experiment was also performed; a heart in relaxation by the action of the acid passed into extreme contraction when an alkaline fluid was circulated. Dr. Gaskell shows further "that alkaline and acid solutions act upon the muscles of the smaller arteries in the same way as upon the cardiac muscle." Dr. Gaskell concludes "that the one factor upon which the state of constriction of the muscles both of the heart and of the arteries depends is the extent of the alkalinity of the fluid surrounding them"; and, again, "one can say, then, that the presence of an alkaline fluid must tend to keep the cardiac and arterial muscles in a state of tonicity, and that upon the extent of the alkalinity the amount of tonicity will, at all events, in part depend." And, further, Dr. Gaskell seems to lean towards a theory which would explain varying degrees of tonicity by varying degrees of alkalinity, such being produced by an acid generated during muscular contraction, aided, possibly, by an acid liberated by other structures—e.g., grey matter of the central nervous system during their function. The antagonism exercised upon the heart muscle is certainly proved, but how far the ingenious theory which hangs upon it can be accepted must at present remain unsettled.

We propose to show that substances other than acids may take on a *rôle* similar to the one performed by acids. Thus the salts of potassium can, as we have experimentally proved, act quite similarly to acids, in so far as antagonising the effects of sodium alkaline salts is concerned. Thus, we found, that when a circulatory fluid, composed of simple saline with the addition of caustic soda solution of the strength of 1 in 20,000, was allowed to flow through the heart arranged in the oil chamber of a Roy's tonometer, the heart passed into a condition of persistent systole. If, now, a physiological dose of potassium chloride—i.e., 1 in 10,000—was added, although the tonicity (spasm) of the heart was lessened, the heart was not enabled to pass into a state of complete dilatation—that is, the tonicity persisted to a certain extent. Our next experiments were conducted with the bicarbonate of sodium, this salt being used in place of caustic soda, for the following cogent reasons. Sodium hydrate, as such, does not exist in the serum or corpuscles of the blood, while bicarbonate of sodium is present in considerable quantity.[2] Caustic soda, then, possesses properties which, as we shall show in the sequel, are due to attributes other than its alkalinity. A normally beating heart being taken, and the saline solution being circulated through it as before, a quantity of bicarbonate of sodium was added, equal in strength to 1 in 5000. The effect of this dose was soon apparent. The beat, which had under the influence of the simple saline solution sunk almost to *nil*, recommenced, and the heart rapidly passed into a state of persistent systole, induced partly by the increased tonicity and partly by the fusion of the beats. In subsequent experiments even larger doses of the sodium bicarbonate were employed, and it was found that the condition of tonicity (persistent spasm) was produced so much the more quickly as was the dose increased.

To return. When the heart was finally contracted a high degree of tonicity being fully established, potassium chloride was added in physiological doses (1 in 10,000). In every case the ventricle underwent complete relaxation—*potassium chloride completely counteracted the effect of the sodium bicarbonate*,—tonicity of the heart muscle giving place to relaxation, the rhythmic contractions persisting. To test this antagonism

[1] Journal of Physiology, vol. iii., p. 48 et seq.

[2] Gamgee's Physiological Chemistry, p. 60.

further, as large a quantity of sodium bicarbonate as 1 in 250 was used—i.e., a dose very largely above the proportion of sodium bicarbonate existing in the blood when that fluid is physiological. When the effect of the sodium salt was well marked and a pronounced condition of tonicity was established, 3 cc. of the potassium salt (1 per centt) were added to the 200 cc. of the fluid—i.e., about 1 in 6000,—with the result that complete relaxation of the induced tonicity ensued. The addition of 1 cc. more of the potassium chloride, making the proportion about 1 in 5000, produced no further effect. It is needless to enter in detail into the subsequent experiments; they showed conclusively that: (1) the addition of the potassium salt can prevent the appearance of tonicity even when large doses of sodium bicarbonate are present; doses far larger than exist in the blood physiologically or could be administered therapeutically; and (2) the tonicity once induced by sodium bicarbonate can be completely overcome, relaxation replacing it when potassium chloride is added in physiological doses.

It would, then, appear from our researches that even if the alkalinity be a factor in promoting cardiac and vascular tonicity, and we shall return to the consideration of that question immediately, it cannot, however be asserted that the presence of an acid or acid tendency is the physiological antagonist in the body whereby cardiac tonicity is lessened or annulled. All that can be asserted, it appears to us, is that the hypothetic production of an acid condition, or rather of a lessened alkaline condition of the blood, may be instrumental in lessening cardiac tonicity.

We have in the experiments narrated above shown that potassium salts can actually prevent the occurrence of cardiac tonicity, even when such a large quantity of alkaline sodium bicarbonate is present as is competent, when unopposed, to induce a condition of extreme cardiac tonicity; and we are warranted by the fact that such potassium salts are present in large quantity in the blood and parenchymatous tissues, in saying that the bicarbonate of sodium cannot be accredited with the power of inducing constriction of the heart and vessels. But in order that we may deal with the problem involved in the action and antagonism between acids and alkalies, it is essential that we should place before us the physiological conditions which are present in the blood, and, as far as may be, reproduce them in our experiment. And we must make due allowance in deductions drawn from our results for departures from the physiological standard. It becomes, then, at once evident that the sodium bicarbonate which is found in the plasma could not induce tonicity either in the heart or vessels, its tendency in that direction being completely held in check by the chloride of potassium which, upon Lehmann's, Schmidt's, or Serlini's analyses,[1] is present in far larger quantities than those employed by us to counteract the sodium bicarbonate. From the above facts and considerations we conclude that variations in the alkalinity of the blood must exercise very little, if any, influence upon the tonicity of the bloodvessels and heart. But with the theory that arterial and cardiac tonus depend upon the alkalinity of the circulating medium is coupled one which would explain rhythm as resulting from an alternating degree of more or less alkalinity. It would then be admitted that our experiments completely subvert such a theory, rendering it wholly untenable.

Further investigations, indeed, have tended to make us believe that the "alkalinity" as such plays a far less important part in the induction of tonicity of the heart and vessels than has been heretofore supposed. Another possible explanation offers itself—viz., that the action of the alkaline bicarbonate of sodium upon the muscle causing the condition called tonicity is at bottom a *sodium* effect. On this supposition we should expect to find that as the sodium became more or less chemically saturated, so would its effects become less or more marked. And such seems to be the case, for we may, without insisting further upon this point—one really of no important bearing upon the main facts of our present investigation,—instance the behaviour of the hydrate of sodium with the bicarbonate of the same metal.

We further undertook experiments to clear up the question whether the alkalinity was the true factor at work, and we found it was not so. When the heart was supplied with normal saline, massive doses of bicarbonate of sodium were added until the circulating fluid was rendered strongly alkaline, as judged by the bluing of red litmus paper. Tonicity or persistent spasm was developed, but when chloride of potassium was added the heart relaxed. An extremely dilute solution of caustic soda (1 in 40,000) was then taken. Its reaction to red litmus paper revealed that it possessed but feeble alkalinity; nevertheless it provoked the condition of persistent spasm or tonicity, and the heart thus treated did not become so completely relaxed, even when large doses of chloride of potassium were added. As, however, the blood possesses in its sodium phosphate a possible source of alkalinity other than the sodium bicarbonate, we instituted experiments with that salt. The solution which we employed was strongly alkaline. In physiological quantities we found the phosphate of sodium exercised no influence over the heart muscle, nor were marked results obtained with solutions which gave a strongly alkaline reaction. When, however, the sodium phosphate was pushed so that as huge a dose as 1 in 50 of artificial blood solution was reached some fusion with possibly increased tonicity of the heart were apparent. It is highly significant, however, to note that even in this extreme case, the addition of more potassium chloride removed the tendency alike to fusion of beat and increased tonicity of the heart. When the sodium phosphate was used with simple saline solution, we found that for a time it increased the vigour of the beat but produced little increase in cardiac tonicity, and such as appeared was promptly suppressed when potassium chloride in physiological doses was added. These experiments add further evidence that solutions, although strongly alkaline, do not necessarily increase cardiac tonicity. They show also that both the salts of the blood which are usually stated to give to that fluid its alkaline reaction, are completely overridden by potassium chloride, in so far at least as they are operative in inducing an increment in cardiac tonicity.

In experiments the results of which appear in the Transactions of the Royal Medico-Chirurgical Society, vol. lxvii., p. 78, it was shown that even highly alkaline solutions of the sodium bicarbonate do not as such determine constriction—that is, tonicity of the bloodvessels. Thus, as for the heart so for the bloodvessels, we find there are bodies which promote tonus, and that although some alkaline salts are included among them, yet there are others which oppose tonicity.

To sum up, then, we find from our experiments that the tonicity of the heart and vessels produced by alkaline solutions of sodium salts, such as are present in normal blood, will not only not appear in the presence of an acid, but will not be induced in the presence of potassium chloride; thence it is inconceivable how, in the teeth of the fact that large quantities of this salt—potassium chloride—exist in the blood, the tonicity of the heart and arteries can be due to varying degrees of alkalinity. And we further find the alkalinity of the solution does not determine its power of producing tonicity in the muscles of the heart and smaller vessels, and so we suggest that this result may accrue from the degree of chemical saturation of the sodium present in the sodium salt.

[1] Quoted by Gamgee: Physiological Chemistry, p. 69.

TWO CASES OF GASTROTOMY FOR EXTRA-UTERINE GESTATION.

BY JAMES BRAITHWAITE, M.D. LOND.,

LECTURER ON DISEASES OF WOMEN AND CHILDREN AT THE LEEDS SCHOOL OF MEDICINE, AND SURGEON TO THE WOMEN AND CHILDREN'S HOSPITAL.

CASE 1.—Mrs. A——, when three months advanced in her third pregnancy, was seized with severe pelvic pain, so severe that it was necessary to administer morphia hypodermically. The whole of the remainder of her pregnancy was passed in misery from pain and sickness, with obstinate constipation. Towards the end of the pregnancy her medical attendant, Dr. Green of Leeds, convinced himself that it was a case of abdominal extra-uterine gestation. He could distinctly make out the position of the child through the abdominal walls. I saw the patient with Dr. Green a fortnight after the occurrence of a sanguineous vaginal discharge with some pain, which indicated that the uterus had thrown off the deciduous membrane. I need not say that when this occurs the death of the child may be considered certain. I found the patient in a very low con-

dition and looking worn from prolonged suffering. The position of the child could be readily made out, showing that no placenta intervened; a very important matter as regards the success of an operation. The cervix uteri was widely open and trumpet-shaped. The first two fingers of the left hand could be readily passed quite up to the fundus, the uterus being only three inches in length. Of course the only question was, What to do with the patient? for there could be no doubt as to the diagnosis. We decided to remove the child at once, as the condition of the patient could not admit of delay. This was done on May 5th, 1883. The incision was central; no peritoneum was met with, and the sac was closely adherent to the abdominal walls. The child was lifted out by its feet, but it proved so large that it was necessary to extend the incision upwards another inch. This unfortunately detached the cyst from the abdominal wall, and a coil of bowel protruded into view at the upper part of the wound. The cyst was carefully stitched to the lower surface of the wound with a continuous catgut suture. The placenta was deeply situated, but to what part it was attached was not positively ascertained. The cyst was of considerable thickness, already black from decomposition and lined with a smooth shining membrane (the amnion), which readily peeled off. After washing out the cavity with warm carbolic water the wound was closed with silver wire sutures, the cord being left hanging out at the lower end of the wound. A large glass drainage-tube was also inserted. During the next three weeks the whole of the placenta came away through the lower part of the wound. The cyst came with it, and I recognised the catgut which had been used at the upper margin of the abdominal wall incision. Much of the black and putrid mass was removed by daily traction upon the projecting parts, but unless great care was used hæmorrhage occurred. When the whole of the placenta and cyst had come away, the wound healed up rapidly, and the patient made a good though slow recovery, and she is at the present time as well as she was before her illness.

CASE 2.—Mrs. W——, of Holbeck, a patient of Dr. Dobson's, with whom I saw her in September last year, aged thirty-five, has been married ten years, but never pregnant until the present case occurred. Menstruation all her life quite regular and natural; the last period was about Oct. 15th, 1883. On Dec. 3rd, having missed exactly seven weeks, she was slightly unwell, and had at the same time, to use her own words, "a very violent pain" in the body. The symptoms were such as would be produced by rupture of an early tubal gestation—viz., pain and collapse. She recovered from this, but the body went on increasing in size just as in normal pregnancy. At the end of August a sanguinolent discharge occurred, and this may therefore be taken as the time when labour would have taken place had gestation been uterine. The movements of the child, however, ceased to be felt about the end of the first week in August. By examination of the abdomen the outlines of the child were not perceptible as in the last case, but some thick substance intervened, which subsequently turned out to be the placenta. This much increased our difficulty in the diagnosis. There was a projection outwards of the abdominal walls in the right inguinal region, which felt not unlike a foot. There were no fœtal or placental sounds audible. The uterus measured only two inches and three-quarters and the cervix was well open, so that the finger could be passed up to, but not through, the os internum. The pulse was weak, and the condition of the patient such that, being quite certain it was a case of abdominal extra-uterine gestation, we decided to remove the child at once. This was done on Sept. 11th 1884 at the Women and Children's Hospital. The incision was central, and we came, as expected, directly upon the placenta, the edge of which, however, was found about two inches to the right of the incision. Careful separation of the placenta in this direction did not produce hæmorrhage. An incision at right angles to the first was now made, and the edge of the placenta being pushed back the feet of the child were seized, and it was removed without much difficulty, the placenta yielding to the pressure without being torn or separated from its attachment to the abdominal walls. It seemed to me that a single layer of peritoneum intervened between the placenta and the abdominal wall. This was carefully divided upon a director. This was no doubt the peritoneum proper to the abdominal wall. Whether the child was enclosed in a cyst or not we were not quite certain at the time of the operation; but, as proved afterwards, this was the case. There were no veins in the abdominal walls at the seat of the placental attachment except just at the lowest angle of the central incision. These I was careful to avoid wounding; they were, however, only of small size. The wound was closed with silver wire, the funis being left out, and a drainage-tube inserted, both at the extreme right of the lateral incision. An attempt to separate the placenta with the finger and traction in about two weeks set up hæmorrhage, and it was not attempted again until the discharge became very decidedly purulent at the end of six weeks. The whole of the placenta which had not been removed, for some small portions had been, was at the end of six weeks separated by the finger and removed without much difficulty. It weighed thirteen ounces. The patient is still in the hospital, but is nearly well. In introducing the finger for removal of the placenta I felt the cyst walls, which appeared to be pretty firm and thick.

The first thing worth remarking in the history of these cases is the occurrence of severe pain early in gestation, attended with some degree of collapse. This indicated rupture of the Fallopian tube, in which, up to that period, the fœtus had resided, and its escape in the first case into the interior of the broad ligament, and in the second into the peritoneal cavity. I assume that the explanation of these cases given by Mr. Lawson Tait is the correct one, and I believe it to be so—namely, that all cases are originally tubal, that rupture always occurs, but that this rupture may be in different parts of the tube; if on the lower surface of the tube the fœtus is let down between the folds of the broad ligament, and then develops, the placenta retaining its original hold upon the interior of the tubal cyst; if the tube ruptures on its upper surface the fœtus escapes into the peritoneal cavity; and if the mother survives it develops there just as it would have done in the uterus. It seems pretty clear that in my second case the placenta was detached from its original position and took root again in a fresh one, and that the interior of the abdominal walls. This situation of the placenta is rare, and I think it may without much difficulty be diagnosed by the thickness of the structures intervening between the fœtus and the examining hand.

The first case would be called one of subperitoneal pregnancy, because the peritoneal cavity was altogether external to the fœtus and its cyst. The course of the peritoneum at the time of operation would be down the abdominal parietes to the umbilicus, then reflected upwards over the anterior surface of the upper part of the cyst, then over its summit and down its posterior surface, so that up to the level of the umbilicus the peritoneum had been separated from the abdominal walls by the growth of the child upwards; whilst above the umbilicus the cyst covered with peritoneum projected into the peritoneal cavity.

In the second case the child was contained in a false cyst, composed of a fibrinous effusion, which shut it off completely from the peritoneal cavity. This, however, is not necessarily present in intra-peritoneal pregnancy, and the child may be found loose in the peritoneal cavity. It is worth remarking that if the peritoneum is not stripped upwards with the growth of the fœtus in subperitoneal or extra-peritoneal pregnancy, the cyst is found covered with peritoneum anteriorly, just like an ovarian cyst. An instance of this is the case related by Dr. Heywood Smith,[1] in which a thin cyst was found not adherent to the abdominal walls and covered with peritoneum.

It is very remarkable that in the first case the cyst itself died at the same time, or about the same time, as the child and the placenta; for it was found black at the time of operation, and was subsequently thrown off with the placenta. *A priori*, one might have supposed that such a thick cyst would have retained its vitality. Probably its contact with the dead placenta accounts for this. In the second case the cyst did not die, although its vascular supply must have been insignificant, or absent altogether; whereas the vascular supply of the first cyst must have been very considerable.

It seems to me a remarkable thing that when the cyst and placenta in the first case formed a black sloughing mass, which was directly in contact with the peritoneum externally, there were no signs of peritonitis or septicæmia. No doubt the external surface of the peritoneum has different properties from those of the internal and more absorbent one.

[1] Obstetrical Journal, vol. v., p. 504.

SCHOOL WORK AND DISCIPLINE AS A FACTOR IN CHOREA.

BY OCTAVIUS STURGES, M.D.

PHYSICIAN TO THE WESTMINSTER HOSPITAL AND THE HOSPITAL FOR SICK CHILDREN.

IN an analysis of 200 examples of chorea which have been under my own care during the last ten years, there are as many as 121 where—either because there is an absence of all apparent exciting cause, or else (and this more frequently) because there is room for contention as to which of several events ought properly to occupy that place—the actual mode of origin of the affection is left in doubt. There remain seventy-nine cases of known causation, and of these fourteen were due to schooling. In other words, a continuous observation, embracing a large number of cases and excluding those which are uncertain or equivocal, finds one in six to represent approximately the proportion of children suffering in this particular way, owing to circumstances directly connected with their education.

It is true that these figures must not be rigidly insisted on. On the one hand, it is to be remembered that not all of the 200 are in the pupil state; on the other, that the chorea of schooling, or (to be in harmony with a well-worn expression which the subject suggests) of over-schooling, is pretty certain to appear as such, while the chorea from other kinds of nervous shock to which children are peculiarly liable is very likely indeed to seem spontaneous. No doubt the fourteen sufferers I have named ought to be taken from a larger number than seventy-nine; still there they are. School training is responsible in greater or less degree for chorea; it is responsible for it in a degree which, by comparison with other causes, is not inconsiderable.

But it is said it is not the schooling that should be blamed, but the underfed condition of the scholars. And in favour of that view it may be urged that chorea is a disease of the poor rather than of the rich. But it is not by preference a disease of the very poor. No one, I think, with large experience of sick children would say that this affection belongs to the group which we learn to associate with extreme poverty and neglect. Chorea is a disease of the poor because, speaking generally, the poor are less careful and observant and more happy-go-lucky than the rest of us as regards both themselves and their children. It is a disease of the London poor because crowded streets and roadways and overcrowded dwellings afford abundant occasions of alarm and disquiet, and because, other things being equal, the London child is feebler and less able to cope with its surroundings than the country child.

During the last six months as many as eighteen examples of chorea (not included among those just quoted) have been admitted under my care to the Hospital for Sick Children. In nine of them various reasons are assigned for the affection, which on inquiry appear to be veritable exciting causes. In six it is school work which figures in this relation. Two of these are girls who had been excited and sleepless in prospect of a school examination, one of them having moreover received a severe caning for being late, which left its mark for some days. Of a third girl, a pale, dull, child of eleven, in the sixth standard, who for a month before had complained of pains in the head and heart, it was alleged that she was kept at her lessons every day, including meal time, up to nine o'clock, and had had no time for play for months. In a fourth instance, a boy aged ten got chorea quite suddenly whilst in school after a caning on his hand. It was a second attack; the first had been due to a drunken man falling upon him. The two that remain had been "bothered" over schooling and sums, and to one of these I will refer more particularly presently. There are, besides, a child who had been run over in the street, one who had been frightened by seeing a mad dog shot, and a girl of eleven, already choreic, but allowed to be up and about, who became much worse on seeing a boy kill a kitten in a very cruel manner. The list serves to illustrate the injurious effect upon poor children, not only of excessive school work, but of naked exposure to the dangers and brutality of a crowded city. It is remarkable that all the patients save one are girls.

And not only may school operate injuriously upon children apart from any particular error or deprivation in the way of food, it is even possible to classify and to graduate the mischief done in this particular way. There are the excitement and mental strain produced by competition; there are the effect and the fear of school punishment; and there are the worry, disappointment, and despair over lessons that are too hard or too many. Such causes will sometimes of themselves produce chorea; and sometimes, and perhaps more often, they will bring about such nervous instability that the least additional strain will show itself in that way. The severest and most rapidly fatal case of chorea I ever met with was that of a girl, a pupil teacher, who, on her way to an examination, the prospect of which had excited her very much, was still further disturbed by a carriage accident, in itself quite trivial.

Apart from combined causes of this sort, which do not now concern us, there is the question as to which of all the various rigours of over-schooling is the most effectual in the production of chorea. If I were called upon to answer that question in a single word, experience would teach me to say *sums*. In the two patients just mentioned, where the worry of school work is the alleged exciting cause, the particular form of the trouble in both is ciphering. One of these children, indeed, so well illustrates the way in which this comes about in scores of similar cases that in spite of its apparent triviality it is really instructive, and I may be pardoned for quoting it. This girl, aged nine, healthy and ruddy, but of excitable temperament, is stated by her mother to have been troubled and sleepless owing to school lessons, and especially sums. The choreic movements are slight, but general, and the voluntary muscles still within control. Some days after admission, when the child is first questioned on the subject, the mention of sums at once excites weeping. This form of emotion, it may be said by the way, is an excellent criterion for use in chorea. Children will readily assent to whatever is stated of them, and mothers are prompt and ingenious to discover causes for an affection of this kind, which is still overladen with superstition in the minds of the ignorant. But when bare mention of some actual incident—a beating, or a dark cupboard, or a strange dog, or some school hardship—occasions a flood of tears there need be little doubt, I think, that we have reached the real, although of course not necessarily the sole, source of the malady. In the present instance, so soon as the first outburst was over, the child was willing to enter into details. The particular form of her affection was long division, or what she called simply "division." Short division she had never known, it had been skipped. And it might very well have been, as the child herself seemed to think, that the sudden transition from subtraction to long division, due to some unexplained accident, was the beginning of all the trouble. As evidence of her capacity the child worked a sum in long division before us sitting up in bed. It is an operation familiar enough, I suppose, to teachers, but curious and suggestive to watch where the performer is a nervous and choreic child. The method employed was no doubt that which had been taught, and it was this. The left arm is clutched round the slate, the fingers being hooked to its right upper corner, and it is maintained in writing position by being pressed against the pit of the stomach. Face, lips, and tongue concur with the right hand in the work to be done. The slate pencil is held low, and, the tip of the forefinger being always moist, figures in the immediate vicinity of writing operations are in danger of getting accidentally rubbed out. This is particularly the case at the moment when, to signalise the fact that a figure has been brought down from the dividend, a little cross is made just above it. At the slightest suggestion of error the work is suspended, the finger rewetted, and the doubted number rubbed out. From the frequency of such erasures and the mode of effecting them, the working surface of the slate becomes wet and sticky, insomuch that it presently ceases to afford sure holding for the pencil point. In the bad places, indeed, owing to repeated correction, there is a confused mixture of saliva and pencil mark which can no more be written upon than a coat of varnish. The seriousness and persistence with which the child encounters all these difficulties, the conscientious completion of each figure and prompt wetting of the finger to score it out, the cheerfulness and alacrity displayed when the time comes for some formal and obvious act, such as drawing lines and affixing crosses, the way in which severity of mental conflict is shown by a tighter grasp upon the slate and increased pressure upon the stomach—all this makes a picture which to the un-

initiated is half comical and half touching. This child was working her sum in long division in bed and before indulgent critics. I am told it is the custom at some schools to stand round in a class and work sums at a uniform rate by word of command. Suppose a child, like this patient of ours, to have been already harassed and haunted by sums and driven to the verge of chorea, her hands and feet restless and unruly. Then suppose her standing in class, with heels together in the "first position," ciphering. Is there any kind of work that can be thought of so admirably contrived to develop the complaint we are considering?

From this point of view, indeed, it is not the patient that is to be pitied, it is the poor child who is working up to that condition and qualifying for chorea by daily endurance, failure, and penalty. Once the affection declares itself, and there is an end to all this suffering. The defaulting scholar becomes the indulged patient, happy enough if only left to such rest as she can command, and not troubled about coördination. Chorea comes as a friend. Yet it is amazing how long it will remain unrecognised; how, almost habitually, the characteristic movements of an affection, which ought to be familiar to every teacher and parent, are at the first mistaken for awkwardness or perversity.

And this brings me to the object and end of this paper. We write about these things, but we cannot mend them much. Sums will be worked in the new year much as they were in the old, children will be brought prematurely into long division, the pressure of schooling will be ill adjusted, here too much and there too little, teachers will be impatient and exacting or lax and negligent, just as before. We must not expect too much. Yet what a world of suffering might be saved—suffering which is in the highest degree cruel and unjust—if every school teacher, and especially those in London, were required to know the more obvious signs of St. Vitus's dance; know them, I mean, not as we do, but sufficiently to be able to pick out for skilled examination such children as have suspicious symptoms. All children are fidgety, and all fidgetiness is not chorea; yet any signs of extra fidgetiness, any manual defects which are new and striking, ought always to suggest chorea and to lead to inquiry. This is more especially the case when the child has just been put into a higher class or into a new rule of arithmetic, or when she is in training for examination. When the careful child becomes careless or the dexterous awkward, when writing suddenly deteriorates or place in class is repeatedly lost, when slates and books are much dropped, or there is obvious facial movement in writing and reading, in all such cases I do not say there is chorea, for natural perversity and "temper" have to be taken into account, but I say there is ground for that suspicion, and particularly with girls and those who have had the disease before.

We hear sometimes regrets expressed that disease has been suffered to run its course to a fatal termination, and that the doctor has been called in too late. And we have to admit that from the nature of the malady no medical aid would have been of much avail. With chorea the case is different. There is little enough of danger in it, but such as there is arises from the fact that helpless children, unable to express themselves, and even with a sort of belief that their involuntary errors are really of the nature of sin, are left for an indefinite time exposed to all the hardship and rebuke which their condition entails. All this may be prevented and a vast amount of child suffering spared, if only we can teach the teachers how to observe.

Wimpole-street, W.

CASE OF EPILEPTIFORM SEIZURES, WITH UNUSUALLY SLOW PULSE.

By F. ST. GEORGE MIVART, F.R.C.S. Ed.,
SURGEON TO THE WESTERN GENERAL DISPENSARY.

J. K——, aged sixty-one, a "caretaker." Has served in the army (never out of England), and also in the police force, particularly the police department of the Excise. No history of neuroses in his family. Has never had syphilis or acute rheumatism. Has always been temperate, and on the whole has enjoyed moderate health, except that, to use his own words, "he has suffered from his heart." He himself refers this to hard work and long hours of exposure to cold and wet while in the police force, and remembers being much troubled at times while on duty by the throbbing of his heart. Since then until within the last few years he has frequently suffered from palpitation, which has usually come on at night, and sometimes has been so severe as to shake him in his bed. On these occasions he could generally feel his heart beating rapidly. He never had a fit of any sort until six years ago while working in a garden, when he appears to have had one fit of an epileptoid character and short duration. Two years later he had another fit of a similar character. Both these attacks came on when he was stooping forward with his head low down. He has noticed that stooping always makes him very giddy, and he has consequently avoided that posture as much as possible. His next attack was on the 23rd of March last. While sitting on a chair his wife says she saw him suddenly fall forward, and he had then three fits in succession, apparently of the *petit mal* variety. He would seem by the description given me to have been much cyanosed. On all these occasions before the seizure he was conscious of a buzzing sensation in his head. I saw him on the following day. He was then in bed, unable to stand, complaining of giddiness and a feeling of confusion, also a sense of constriction at the chest with difficulty of breathing. He is a tall, well-built man, but looks flabby and anæmic. Pupils equal and normal; urine and temperature both natural; tongue a good deal coated, bowels confined; pulse regular, tolerably firm and full between the beats, which are at the rate of only twenty per minute; heart's impulse almost imperceptible except very faint movement at the tip of the sternum. The presence of sibilant rhonchi and wheezings renders the auscultation of the heart a little difficult, but apparently there is only one sound audible accompanied by a bruit, heard best towards the apex. The sound of heart is synchronous with the radial pulse. Owing to the patient's employer being anxious for his removal I was unable to visit him again for some weeks, as he was taken to a remote suburb. I saw him again on the 18th of April, nearly a month after my first visit. He said he felt better. He had had no more fits, though he still felt very giddy on any sudden movement. In appearance he is more markedly anæmic than before. I examined him both in the erect and recumbent positions, and in each the pulse-rate was the same—viz., 24,—while the artery was still firm and full. In the erect posture I found his cardiac sounds more audible, and was able to detect a soft systolic bruit somewhat like a prolonged first sound at the apex and round towards the axilla. I could also distinguish an apparently aortic systolic murmur. The impulse of the heart was more perceptible; the urine was dark coloured, acid, sp. gr. 1018; and the potassio-mercuric iodide test showed a trace of albumen. On visiting the patient a month later I found the physical signs unchanged, but he says he feels decidedly better, and he can now walk from room to room. His pulse-rate is still the same—viz., 24 beats per minute,—but after walking up and down the room several times it rose to 26. I very much regret I have never had an opportunity of examining the pulse during a seizure.

The question, of course, arises as to whether the seizures were really epileptic. That they partook largely of a syncopal character cannot, I think, be doubted, and the distinctly cardiac history of the case points to this. The decreased impulse of the heart makes it probable that the aortic murmur is due to atheromatous deposit about the valves. Possibly, also, there may be some aortic stenosis, and there can be little doubt that the heart is fatty. This being so, more or less anæmia of the brain is not unlikely, and attacks of syncope from this cause can be understood. "Between syncopal attacks and those of minor epilepsy," says Dr. Russell Reynolds, "there is perhaps a much closer analogy than is generally supposed." Now, there was undoubtedly a considerable epileptic element in the attacks described. My idea is that the seizures were simply swoons modified by the patient's epileptic tendency.

Green-street, Grosvenor-square, W.

DAVIS, the fireman, who was seriously injured in the railway collision between a Great Eastern and a Midland train, near Camden-road, on Monday night, died in the Royal Free Hospital, Gray's-inn-road, on the 30th ult. He was suffering from a compound fracture of the skull, and was in a semi-unconscious condition from the time of his admission until his death.

ON LIFE-SAVING FROM DROWNING BY SELF-INFLATION.

BY HENRY R. SILVESTER, M.D., B.A. LOND.,
FOTHERGILL MEDALIST, ROYAL HUMANE SOCIETY.

"He long survives who lives an hour
In ocean, self upheld;
And so long he, with unspent power,
His destiny repelled;
And ever as the minutes flew,
Entreated help, or cried 'Adieu!'" COWPER.

THE reduction of the specific gravity of animal bodies by means of hypodermic inflation is a subject which has for some time engaged my attention. I have endeavoured to elucidate it by an experimental inquiry, my object being to diminish the great mortality from drowning. From the earliest ages attempts have been made to render the human body capable of floating in water, but these efforts have mainly been in the direction of attaching to the body, when immersed, various substances of less specific gravity—such, for instance, as the inflated skins of animals, life belts, &c. Atmospheric air, from its extreme lightness, —namely, 815 times lighter than water—has been most frequently employed, but there has been some difficulty in finding a suitable envelope for containing it. It is atmospheric air which is universally employed by nature to produce buoyancy. Many fishes possess hollow sacs filled with air, and these sacs are developed occasionally from the ventral, though more commonly from the dorsal wall of the pharynx, œsophagus, or stomach. In the Teleostei the membrane lining the branchial chamber is prolonged into sacs, which lie at the sides of the body. The Diodons and Tetrodons render themselves buoyant by swallowing air, which filling the first stomach, they become inflated like a balloon. In the case of birds there are in some as many as nine air sacs, two of which are situated in the cervical region, whilst in some of the Lacertilia the membrane of the larynx between the circular cartilage and the first ring of the trachea protrudes in the form of an air sac.

It will be within the recollection of your readers[1] that I have already demonstrated at the International Fisheries Exhibition the possibility of inflating the subcutaneous space in animals so as to render them sufficiently buoyant to be employed either singly or yoked together to convey persons from a wreck to the coast; but since animals are not always present in cases of shipwreck, and human lives may be saved by being enabled to traverse a few yards of deep water, I have demonstrated the possibility of producing in man himself the condition known as surgical emphysema. In August, 1883, at King's College Hospital, by means of a blowpipe and elastic syringe, I inflated at the wrist the subcutaneous tissue of the whole body with the result that in a few minutes sufficient air passed under the skin to support a weight in water of between forty and fifty pounds. This amount is considerably more than would be required to preserve a person from drowning, nine or ten pounds being considered sufficient. Although one can imagine the existence of circumstances which would justify such a proceeding as the above, yet the practice of it would require a certain amount of surgical knowledge. Moreover, it would be impracticable except under favourable circumstances; and there are probably few persons capable of accomplishing it in their own bodies. I have accordingly sought for a much easier and more ready means of rendering the body buoyant in water, and which could be accomplished without the employment of any apparatus, and, in fact, which might be performed without assistance in a moment, under the most adverse circumstances, and by the most ignorant, if once instructed in it, and without danger or pain, and suitable alike for the roughest sailor or the most delicate female. The intention of the proposed operation is to cause the skin of the neck and upper part of the chest to be sufficiently distended with air to support the weight of the body when immersed. The inflation being effected by the person himself by means of his lungs without the intervention of appliances. The operation consists in making a small puncture—not larger than would allow, for instance, of the passage of an ordinary blowpipe—in the mucous membrane of the inside of the mouth, the object being to open a communication for the passage of air from the cavity of the mouth into the subcutaneous spaces of the neck. The situation chosen for the puncture is in the angle formed between the gum of the lower jaw and the side of the under lip or cheek, about opposite the first molar tooth of the lower jaw. The point of the instrument perforating should be passed down a short distance between the skin of the side of the face and the superficial fascia of the neck, its point being guided by the finger placed on the outside of the face and neck, taking care not to puncture either the skin or the superficial fascia. This having been done, and the instrument removed, in order to inflate the skin of the neck and chest, the patient should close the mouth and nose, and make a succession of forcible expiratory efforts, when the air contained in the cavity of the mouth will pass freely into the subcutaneous tissue of the neck. These expiratory efforts, inspiration being effected through the nostrils, should be continued until the skin is fully distended with air, which will pass readily to both sides of the neck and down the chest as far as the nipples; and this is all that is required to render the body buoyant in water. Should it so happen that the superficial fascia has been punctured and the air pass beneath it, the only difference in effect would be that the extent of air would be limited by the attachments of that membrane to the clavicle below and the border of the jaw above. The amount of air which the skin of the average neck is capable of holding without undue distension has been measured, and found to be enough to support ten pounds, and this is amply sufficient to support the body immersed in water. The time required for inflation is found to be less than three minutes. The neck may be kept in an inflated condition by closing the puncture by pressure on the outside of the cheek by the finger, or by keeping the mouth distended with air; and when required the air may be immediately discharged from the neck by allowing the puncture to remain open, or by suction.

The advantages may be summed up as follow:—1. The proceeding is perfectly harmless and almost painless, quickly done, and almost immediately recovered from. 2. It may be learnt in a few minutes, no technical knowledge being required, and may be accomplished by the person himself without assistance. 3. No special apparatus is required. In an emergency the point of a penknife, or even a sharp pointed splinter of wood, is all that would be required. The inflating apparatus is the person's own lungs. 4. The air could be repeatedly reinflated, and even during prolonged immersion.

Clapham-common, S.W.

[1] Vide THE LANCET, July 7th, 1883, "Hypodermic Inflation."

TRANSFUSION IN A CASE OF CHRONIC PHTHISIS.

BY T. W. CARMALT JONES, F.R.C.S. EDIN.,
SURGEON TO THE WESTERN OPHTHALMIC HOSPITAL.

ON May 14th of last year, in consultation with Mr. De Gruyther of Holloway, I saw Mr. C——, a diamond cutter, aged thirty-four. He had been suffering from phthisis for about nine years, but had been able on and off to go to work. Latterly he had found his strength failing and nine or ten weeks before I saw him he had given up work. For seven weeks he had not been outside the house, and for the last fortnight he had kept his bed continuously. He was then so weak that he was unable to get out of bed or to stand without assistance; the most he could do was to sit up in bed and get to the edge of it and let his legs hang down. He was very thin, the hands shrunken and the skin loose; the face was pale with a patch of pink colour on each cheek; the skin of the face looked sodden and clammy, though he said that he was never troubled with sweating, except after a bad fit of coughing. The expression was anxious; the fingers were clubbed; pulse 135, full and soft, but easily stopped; temperature 100°; breathing rapid with a rattling bubbling sound, audible across the room. By the bedside was a jampot half full of tenacious, purulent sputum, streaked with thin lines of bright blood. He said he had on several occasions brought up large quantities of blood. After examining the chest we agreed that there was a large cavity in the right apex, extensive consolidation, and possibly, also, a cavity in the left. The

heart was normal; no albumen in the urine, of which he passed about a pint and a half a day; but feet and ankles were slightly swollen. The bowels acted daily, motions formed, no blood. Tongue furred; mouth not aphthous. The abdomen was slightly prominent, but soft, not tender, and was resonant down the left side. He did not complain of pain or discomfort after food, or any other signs of dyspepsia. Mucous membranes of eyelids and lips were pale. The patient said he took his food well and enjoyed his meals. His habits appeared to be to have a cup of tea and a piece of toast about 6 A.M., a couple of fried eggs or some fish at 11, and to dine at 6 P.M. off a chop or steak. He did not like milk and did not take much of it. Sometimes he would take a glass or two of port. The friends thought there was very little hope for the patient, and, to use their own expression, wanted to know if we could "patch him up for a few weeks." Considering that the patient was so anæmic, but still had a considerable amount of vitality in him that he could take his food so well and was not being exhausted by night sweats, I suggested transfusion. The patient was willing to try anything, and his wife offered to give the blood.

The next day (May 15th), having procured an Aveling, with the assistance of Mr. De Gruyther and a sister of the patient I transfused about two ounces directly from a vein in the wife's arm to a vein in the patient's arm. During the process the patient exclaimed, "I feel so hot; open the door." The wife rather complicated matters by vomiting during the transfusion, and was rather faint afterwards; but the patient was in no way worse, and said he should be ready for his dinner at the usual time. On the 16th Mr. De Gruyther reported: "Patient is better to-day; his pulse seems to me to be improved, and is 120; he himself feels better." On the 19th I saw the patient, and found his pulse 128, but much less easily stopped than on the 14th. He had taken his food as usual, and said he felt stronger. He further said that on the 17th he had got out of bed and had walked across the room to an arm-chair without assistance, a thing he had not been able to do for a fortnight. The wounds in both cases looked well, and there were no signs of inflammation or tenderness over the course of the veins. On the 21st Mr. De Gruyther again reported: "Our patient is progressing very favourably; his pulse was about 120 to-day and firm; he walks without aid." On the 22nd, one week after transfusion, I saw the patient. I found him sitting in an arm-chair, having moved into the next room. He had walked from one room to the other without assistance. He looked much happier; the pulse was stronger and 128. He said he felt stronger, and that he was sure he should be better if he could only get some sleep, that he had hardly had any sleep from 9 P.M. till 5 A.M. the previous night on account of his cough. The patient's wound was almost well, the one in the wife's arm showed a small slough. On the 25th Mr. De Gruyther wrote: "Our patient had a weak pulse of 116 yesterday, and he himself felt weaker. He says he had a better night on Friday (May 23rd) after inhaling five minims of eucalyptus oil in a metal respirator. The slough from the wife's arm has not come away." On the 26th Mr. De Gruyther wrote: "Our patient is not so well to-day."

May 28th.—Thirteen days after transfusion I saw the patient. I found him setting on a couch in a room next his bedroom; he had walked there with difficulty, and with assistance. His expression was much more anxious; his pulse was 130, and very easily stopped; his appetite was very bad, and he could only take liquid nourishment, such as egg and milk or beef-tea. He had lately discovered that he could take milk. His ankles were swollen. I found that on Friday, the 23rd, he had walked by himself with ease down the passage of his house out into a small garden or yard at the back and had sat in the sun for some hours, and had thoroughly enjoyed it, and that he had slept better that night. On Saturday, the 24th, he had done the same thing again, but had walked with even greater ease, and had felt still stronger. Sunday, the 25th, was a cold day, and he did not go out. On Monday, the 26th, he had not felt so well; on Tuesday, the 27th, he had felt worse, and on Wednesday, the 28th, he had gone back considerably. The cough was still the great trouble, it prevented his resting; but the amount of sputum was considerably less than when first seen, and there had been no sign of blood in it since the transfusion. The wife complained of pain in her arm, the slough had come away, the wound was healthy and healing, but there was tenderness along the course of the median vein, and the vein was thickened and cordlike. On May 30th Mr. De Gruyther wrote: "Yesterday our patient was a good deal weaker; he took a fair amount of nourishment, and had better rest at night."

June 3rd.—I saw the patient, and found him on the couch; pulse stronger, 120. He would take no medicine of any kind; he looked happier again; his appetite was better, and he fully intended to go out into the garden again as soon as practicable.

June 12th.—The patient had been out in the garden several times since June 3rd, but he had gone back. Pulse 120, weak and small. Both legs were much swollen and œdematous. The abdomen measured thirty-one inches and a half; it was tense and full of fluid. Very little albumen in urine, but some dyspnœa at times. A day or two after this date the patient was taken in a cab to the German Hospital, where he remained until July 27th, when he died. I have not been able to hear whether there was a post-mortem or not, but I think it is most probable that it was not allowed.

Westbourne-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas at morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Prooemium.

ST. GEORGE'S HOSPITAL.

A CASE OF RUPTURE OF THE GLUTEAL ARTERY AND ONE OF AMPUTATION AT THE HIP-JOINT ILLUSTRATING MORE RECENT METHODS OF ARTERIAL COMPRESSION.

(Under the care of Mr. HAWARD.)

FOR the following notes we are indebted to Mr. R. Margerison, surgical registrar.

John D——, aged twenty-four, received in May last a blow on the right buttock from the buffer of a locomotive. When admitted soon afterwards into St. George's Hospital, the buttock presented near its most prominent part a contused and lacerated wound large enough to admit a finger. Out of the wound dark blood oozed very freely. The soft parts were very extensively undermined, and beneath them was a large and increasing collection of blood. This blood collection did not pulsate and no bruit was audible. A pad was firmly bandaged over the buttock for three hours. In this interval the collection of blood had greatly increased, and when the pad was removed large quantities escaped. Ether was then administered and the right iliac artery compressed with Davy's lever. When once introduced far enough, this instrument acted perfectly. Mr. Haward enlarged the wound to a length of some six inches. The gluteal muscles were found to be torn across, and beneath them existed a large cavity full of blood. This was quickly turned out, bringing into view the sciatic notch and the open mouth of the gluteal artery. This and a great many other muscular vessels were secured with catgut ligatures. No blood was lost during the operation and the man's recovery was uninterrupted.

The case shows well the value of the lever, and in connexion with this subject of compression of the large vessels of the abdomen it seems well to mention a case of amputation at the hip-joint for sarcomatous disease, which also occurred in Mr. Haward's practice. Here the abdominal aorta was very effectually controlled by a contrivance more or less like that suggested by Sir Joseph Lister. The blunted apex of a pyramidal piece of wood was fixed over the abdominal aorta by an elastic bandage. The apex of the pyramid was about one inch square and covered with felt. The base measured about three inches square and presented instead of a plane surface a broad and shallow groove. The elastic bandage passed round the pelvis and along this groove. When fixed it was placed in the charge of an assistant, who, grasping the wood with both hands, could very easily and

nicely direct and regulate the pressure. This contrivance caused no dyspnœa and completely checked all bleeding.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENTS-PARK.

SEQUEL TO THE CASE OF EXCISION OF A TUMOUR FROM THE BRAIN.

(Under the care of Dr. HUGHES BENNETT and Mr. RICKMAN J. GODLEE.)

IN our issue of Dec. 20th we supplied our readers with some notes of a case in which a tumour had been excised from the substance of the brain on Nov. 25th, with the condition of the patient up to the 15th ult.; to which date the progress of the case had been entirely satisfactory. We are now enabled to give the sequel, which has unfortunately terminated in the death of the patient. On the morning of Dec. 16th the man was suddenly seized with a rigor, followed by fever, sickness, and pain in the head. A hernia cerebri of large dimensions supervened. The pyrexia increased and continued, the patient emaciated, gradually sank, and died on Dec. 23rd, the intelligence remaining intact to the last.

On post-mortem examination meningitis was found at the lower border of the wound, spreading downwards towards the base of the brain on the same side, the whole of which was inflamed and covered with plastic lymph. With the exception of the loss of cerebral tissue, caused by the operation, the brain was otherwise practically normal. We understand that the details of this interesting case will be brought before the profession in due course.

DUNDEE ROYAL INFIRMARY.

ACUTE CEREBRAL MENINGITIS; RECOVERY.

(Under the care of Dr. SINCLAIR.)

FOR the following notes we are indebted to Dr. A. M. Stalker, pathologist, late house-surgeon:—

J. R——, aged eleven, mill-worker, was admitted on March 31st, 1882, suffering from an illness which had commenced five days before. There was no history of illness or injury previous to this. The symptoms were pain and stiffness in the neck, especially on the right side, with general malaise and weakness. The boy's friends said he had been carrying unusually heavy loads on his shoulders two or three days before he began to complain.

State on admission.—Patient has a feverish look; lips dry and cracked; tongue dry, furred on dorsum, and glazed at tip and edges; appetite gone; bowels constipated, motions natural in colour; some abdominal pain; heart and lungs normal. Pulse 108; respiration 28; evening temperature 103·4°. Pupils contracted and equal. Tache cérébrale brought out on abdomen and arms. Patient has tendency to delirium; never lifts his head, complains of frontal headache, cries out suddenly, the cry having a cerebral character. There are diffuse stiffness and pain in the neck, most marked on the right side. For some days the patient continued in much the same state, being generally delirious at night and quieter during the day. Bromide of potassium and opiates were given when necessary, cold lotions were applied continuously to the head, and a blister raised on the nape of the neck. Temperature in the morning 101° to 102°, in the evening 103° to 103·8°; respiration normal; pulse 112 to 120, regular. From April 9th to 17th there was some improvement, the pulse and temperature being nearer the normal, and the patient being quieter. The pupils were now unequal in size, the right being larger than the left. At this time the temperature rose on two successive nights to above 104°. Croton oil was effectually applied to the back of the head. The symptoms showed general improvement, though slow, till the end of April, when the temperature fell to normal, and the other symptoms disappeared. Bowels remained normal all through. Dismissed on June 10th, quite well.

Remarks by Dr. SINCLAIR.—That the possibility of enteric fever was never seriously entertained will excite no surprise after a perusal of the clinical history of this case. Was it tubercular meningitis? Was it an instance of that malady which I am not alone in believing to be extremely rare—viz., acute simple idiopathic meningitis? Or was it a case of meningitis due to an obvious external cause? I must say that tubercular meningitis has never come forcibly before my mental vision in a case of this description, least of all, perhaps, in the earlier stages of its course. That the patient did not die does not by any means exclude the possibility of a tubercular origin; but the age was rather against such an explanation, because, although the disease sometimes occurs beyond the age of ten, it is much commoner before that age, and commoner still between the ages of two and five. It will be observed also that there was no prodromal stage, with its wasting of the adipose and muscular tissues, its languor, mental torpor, unstable emotions, and irritable temper. The pulse was never slow and irregular in the stage immediately succeeding the stage of invasion. The temperature at the time the patient came under observation and subsequently was nearly always too high for this explanation. The idiopathic theory seems to me untenable so long as any other agency can account for the morbid condition. We had here to deal with a previously healthy boy eleven years old. A sudden invasion, a well-marked attack of cerebral meningitis, probably an effusion of lymph, and a complete mental and physical recovery. We had a history of an unusually heavy load having been carried on the shoulders a few days before the onset of the attack; and this I am convinced gives us the solution of the difficulty. The unusual exertion caused, I believe, a determination of blood to the head, and initiated a sequence of events very similar to those which follow closely upon that vaso-motor paralysis which is apt to be induced by exposure to the direct rays of the sun or artificial heat. The recovery was complete, although slow. How much of the result was due to good nursing and careful feeding and how much to the local treatment I am not prepared to say.

CEREBRAL ABSCESS DUE TO CHRONIC SUPPURATION OF THE MIDDLE EAR; DEATH; AUTOPSY.

(Under the care of Dr. SINCLAIR.)

For the following notes we are indebted to Dr. D. J. Reid, late house-surgeon:—

J. Y——, aged twenty-two, carter, admitted on August 17th, 1883, with the following history:—The patient had a rigor three days ago and another last night. Since then he has complained of pain in his head, especially on the left side.

On admission he was so sick that he had to lie down at once. Tongue covered with a creamy fur, and the papillæ enlarged. There was no eruption on the body. His aspect was heavy; pupils natural. He had slight photophobia. Temperature 102°; pulse 144; urine acid, sp. gr. 1024, with slight albumen.

August 18th.—Temperature 103·6°; pulse 84. Ordered dry cupping to the nape of the neck; hair cut short; ice-bag to head. Ordered twenty grains of bromide of potassium every six hours. Had a rigor at 1.45 P.M., and was livid. Morning temperature 103·4°; evening, 101·6°, and at midnight 103·4°.

19th.—Temperature 101·2°; pulse 108; slept fairly well; headache gone. Evening temperature 99·8°; had a rigor at 7.35 P.M., when the temperature rose to 103°.

20th.—2 A.M., temperature 105·6°; 9 A.M., 103°; has had diarrhœa since last night; stools of a "pea-soup" character; 6 P.M., temperature 98·4°.

21st.—9 A.M., temperature 98·4°; 6 P.M., temperature 101°; bowels opened twice to-day.

22nd.—9 A.M., temperature 99·2°; 6 P.M., 100·4°; bowels opened twice; severe headache.

23rd.—Morning temperature 102°; spleen enlarged; slight cough; lungs normal. Ordered a diaphoretic mixture twice daily. Evening temperature 104·4°; bowels opened once to-day.

24th.—Morning temperature 100°; evening, 100°; rigor this forenoon.

25th.—Died this morning at 6.15.

Autopsy.—Abdomen: No peritonitis; omentum injected; intestines filled with loose dark yellow stools; considerable injection of upper half of large and lower two feet of small intestine; some enlargement of solitary glands; no ulceration; spleen large and congested; liver and kidneys normal. Thorax: Heart and lungs normal. Head: Dura mater slightly adherent posteriorly. On removing the brain a small collection of ill-smelling pus was found over the upper surface of the petrous portion of the left temporal bone, between the bone and the dura mater. There was some inflammation and very superficial softening of the temporo-sphenoidal convolutions in the immediate vicinity of the abscess. On sawing through the petrous portion of

the temporal bone the cavity of the middle ear was also found to be filled with ill-smelling pus. There was no discharge in the external auditory meatus, although the tympanic membrane was entirely wanting.

Remarks by Dr. SINCLAIR.—We had here to deal with an entirely different state of matters from that which existed in the preceding case. But I think the two cases may be profitably studied in juxtaposition. The ages of the patients were different; the first a boy, the second a young adult. The results were different; in the former recovery, in the latter death. There may be some difference of opinion as to the cause of the malady in the boy's case; there can be none in the man's. In the case now under discussion it is true the invasion was apparently sudden. But the clinical history was unfortunately very brief, and was marked by rigors and a very irregular range of temperature. The post-mortem examination showed clearly that the fatal result was due to causes which could not possibly have been averted when the patient came under treatment a week before death. The secondary abscess of the brain was beyond a doubt due to an old-standing middle-ear suppuration. To the practically indefinite possibilities for mischief of which this local affection is capable attention has been frequently drawn both by physicians and specialists. In the *Edinburgh Medical Journal*, June, 1881, I drew attention to these dangers, and cited three fatal cases in support of my argument. One died from cerebral abscess, one from pyæmia, and one from pyæmic pneumonia. Such cases appeal specially to the general practitioner, who usually sees them long before the specialist. In its early stages the treatment of suppuration of the middle ear does not usually present formidable difficulties, and should in most cases, with a very moderate amount of skill and care, be brought to a successful issue. Yet, as I ventured to say in the paper just mentioned, "Everyone who sees much of ear diseases is painfully familiar with two reasons assigned by medical men for allowing tympanic suppurations to proceed unchecked—that they cannot be cured, or that they should not be cured. The former answer presumes an amount of intractability which belongs to few suppurations in otherwise healthy individuals; the latter ignores the anatomical seat of the disease."

THE GENERAL HOSPITAL, BIRMINGHAM.

CASE OF SUBSPINOUS DISLOCATION OF THE HUMERUS.

(Under the care of Mr. HASLAM.)

J. McC——, aged thirty-two, applied at the hospital, saying that he woke up in the middle of the night feeling pain in his right shoulder, and that this was due to some twist in bed. (It was afterwards ascertained that he had had a fit.) On examination there was found to be considerable pain about the shoulder on any attempt to move it, the arm was fixed with the scapula, flexed to an angle of 45°, slightly rotated inwards, and the axis of the bone was directed to a point just posterior to the glenoid fossa. On feeling for the head of the bone below the acromial end of the clavicle a distinct depression was felt with hollow tension of the anterior fibres of the deltoid. On inspection posteriorly a slight swelling was noticed just below the junction of the spine of the scapula with the acromion process, and on manipulation this was found to be due to the upper end of the humerus resting on the dorsum of the bone. No reliable measurements could be taken as he had sustained an injury to the elbow when a boy which had totally disarranged the bony prominences. Reduction was easily effected under anæsthetics by a movement of abduction, extension, and rotation outwards.

THE BRITISH OPHTHALMIC HOSPITAL AT JERUSALEM.—This hospital, which was founded in 1882 by the English branch of the Order of St. John of Jerusalem, has, during the first twelve months of its existence, relieved patients to the number of 2546. Owing to the resignation of the resident officer and the difficulty of meeting with an eligible successor, its operations were suspended during the greater portion of last year, but they have now been resumed, and the medical officer reports that the interregnum has only increased the eagerness of the people to avail themselves of his services. The limited funds at the disposal of the Committee will not permit the reception of in-patients, and subscriptions are asked for to remedy this state of affairs.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Conclusion of the Discussion on Charcot's Disease.

A SPECIAL meeting of this Society was held on Dec. 23rd, Sir Andrew Clark, President, in the chair. The meeting was prolonged till 10.45 P.M., in order to bring the discussion to a termination.

Sir ANDREW CLARK said that the discussion had elicited the information that Charcot had been misunderstood, and therefore with a view to preventing further mistakes he would briefly summarise the position which Charcot took. Arthropathies may occur independently of any specific influence from any special nervous disease. Further, an ordinary osteo-arthritis may occur in the course of tabes dorsalis. There were many injuries and diseases, acute and chronic, of the nerves, spinal cord, and brain, which produce arthropathies of various kinds, and amongst them was one which from its pathological appearances and the assemblage and progression of its clinical symptoms deserves and, indeed, demands a specific name, and this was Charcot's disease itself.

Mr. MACNAMARA said there was abundant evidence to show that Charcot's disease was not very uncommon, seeing that from a single London hospital Mr. Lunn had in a brief period collected five typical cases of the disease. There could be no doubt that some diseases of joints were dependent upon altered nervous influences. And the influence of the neurotic element would serve to elucidate and explain some of the mysteries which surround diseases of the joints. A joint may be regarded as an interruption in the continuity of bones; embryology clearly points out this, and histology confirms it, for the synovial membrane was a modified form of periosteum, and there were a large number of osteoblasts about the junction of the periosteum with the synovial membrane. Disease confirms the same ideas, for in chronic non-suppurative affection of joints osteophytes were met with at the junction of the synovial membrane with the bone; these outgrowths were not peculiar to chronic rheumatic anthritis, or to Charcot's disease, since they were found in all joints affected with chronic non-suppurative disease. Ununited fractures and syphilitic gumma of bone exhibited similar changes. Dry bones were extremely unreliable guides in dealing with the pathological nature of joint disease. It was more than eleven years ago since Dr. Buzzard said that chronic osteo-arthritis may also occur in locomotor ataxy. Clinically the difference between Charcot's disease and chronic rheumatic arthritis was still more marked, and detailed reference to Mr. Barker's case showed the typical differences extremely well. After some time the left knee-joint was entirely disorganised, and this fresh arthritic attack was preceded by disorders of the nervous system. The painless course and the fact that the disease never leads to ankylosis of the joint, and that in not a few cases the patient recovers, were striking, for the direct opposite obtained in chronic rheumatic arthritis. The morbid process was that of a rapidly advancing rarefying ostitis. In reply to Sir Andrew Clark, he said that he believed chronic rheumatic arthritis was almost always attended with pain, and that condensation of bone was the chief process.

Dr. BROADBENT said there was nothing in the extent of his experience which would lead him to have taken part in the debate, but the protraction of the debate would possibly allow of a few remarks. One of the most important points which was touched upon by Sir James Paget was the notion that the articular affection was a new disease. This feature, he thought, had not been rightly appreciated, for the information at hand left no room for the identification of this disease with chronic rheumatic arthritis. Sir James Paget's authority was unrivalled on the subject. It was descending to the level of mere cavil to endeavour to connect the two diseases by intermediate links, especially when those links are based on dry specimens of bones. Further, the clinical features establish a complete distinction. In the history of disease, vital processes are of far greater importance than morbid anatomy. There were at least four different ways in which joints became deformed, which give results like those seen in chronic osteo-arthritis. Under the term chronic rheumatic arthritis there came at least two distinct diseases;

that occurring in young females was perfectly distinct from the affection termed morbus coxæ senilis. Then there was the arthritic disease the result of tabes dorsalis, and very similar results may be due to neglected chronic synovitis. What is the new morbid factor in the arthropathy of tabes dorsalis? The views which he held would coincide very much with Charcot's conclusions. Sir James had spoken of the search after the causation of the disease, implying that it was the resultant of different possible morbid processes, such as rheumatism, gout, rheumatic arthritis, syphilis, and so forth, with the view of tracing the dominant influence. But Dr. Broadbent believed that such an object was a hopeless quest, and was a research which would have no particular value. Syphilis was amongst the antecedents of tabes dorsalis, and so we might admit a remote connexion between syphilis and the disease in question. The "slipshod" treatment, the neglect of radical treatment of early syphilis, was possibly responsible for the increased frequency of such nervous diseases. He considered that the view which endeavoured to establish a relation by like causation was a very hopeful one. A derangement of nutrition of the joints may be brought about by disorder of the nervous system, which might be excited reflexly in chronic rheumatic arthritis, and directly in Charcot's disease as the result of a persistent irritative lesion of the spinal cord. If this could be established, we should have gained an important step. It was an explanation of chronic rheumatic arthritis through tabes dorsalis, and not an explanation of tabes dorsalis through chronic rheumatic arthritis. This was very much the position taken up by Dr. Ord, and he considered that the weight of evidence tended strongly in that direction. With regard to the illustration of Charcot's disease by herpes zoster, he did not see so much incongruity as Dr. Moxon did. For it must be remembered that herpes leaves cicatrices, may damage an eye, may lead to atrophy of the entire area supplied by a nerve, and so he felt that the comparison did hold good and was a fair illustration. In his grave philosophic way Mr. Hutchinson had referred to the passive influence of the nervous system, but Dr. Broadbent asked whether the explanation was in accordance with our experience. Was it true that Charcot's disease was generally found in those parts in which the anæsthesia and flinging action of the limbs were most apparent? In his experience the reverse was the case. It was not unfrequent for the ataxy to be discovered after the occurrence of these tabetic phenomena. All that he had ever seen pointed to the exactness of Professor Charcot's views. He had been sorry that Dr. Moxon in proposing a vote of thanks to Charcot should have thought fit to adopt a tone of sarcasm, not to say mockery. He would be sorry indeed to miss Dr. Moxon's presence from our meetings and periodicals, for that would be one pleasure less in life, and would be a great loss to medical science, but still he thought we should have been better spared it on that particular occasion. He considered that such a method of giving a vote of thanks compromised the Society. Dr. Moxon tried also to throw discredit on Charcot's work, and, burlesqued as the information on metallotherapy was, yet it was plain that Dr. Moxon must be in absolute ignorance of the nature of this metallotherapy and Charcot's attitude towards it. Burq had eccentric ideas no doubt on the influence of different metals on unilateral anæsthesia, but Charcot had all along adopted the attitude of a spectator, and would no more think of partaking in any extravagances than Dr. Moxon himself. No one had a stronger respect and regard for Dr. Moxon than he had.

Mr. CLEMENT LUCAS said that he differed *in toto* from the speech of Sir James Paget and those who followed him. Different stages of inflammation were very much alike at their commencement. It was at the beginning of fevers and other maladies that distinction was impossible. Many speakers seemed unable to disentangle themselves from osteo-arthritis. Chronic joint diseases must present certain similarities. In Dr. Moxon's case of traumatic arthritis of the ex-cabman's shoulder there were outgrowths of bone on the scapula. The question of a new disease had a double answer given to it by Sir James Paget. In a general sense the disease might be regarded as a new one, but in a special sense it was a combination of other diseases. The latter view he thought was a combination of errors. It was the custom of curators to collect typical specimens, and it was possible that all specimens of Charcot's disease may have been thrown away as not typical; these considerations might explain the absence of specimens of the disease in our museums. The reference to the differences presented by syphilis in different constitutions by Sir James Paget next occupied Mr. Lucas. All diseases ran different courses in different persons, and yet they did not lose their identity. Syphilis was syphilis all the world over. He regretted that more attention had not been paid to the clinical signs of Charcot's disease. The case shown by him at the Society last year was referred to with a view of showing how peculiar the early stages and subsequent progress of Charcot's disease were, gout or rheumatism being wholly unlike it. We ought to give the credit of the discovery to M. Charcot.

Dr. MACLAGAN thought Charcot's disease was totally distinct from gout, rheumatism, and chronic osteo-arthritis. In its pathogenesis we could not divorce the disease from tabes dorsalis. Because a white leg occurred in the parturient woman we could not say that the local condition had nothing to do with the general one. The general vitality of the ligaments was lowered, and there was loss of sensibility in these structures. The healthy state of the ligaments was essential to coördinate movement. The ligaments being at fault, whilst the muscles retained a great deal of power of movement, loss of coördination resulted. The ligaments give way in the early stage just as the bones do in the later stages. There was a tendency to spontaneous fracture. The inhabitants of La Salpêtrière did not use their arms much, and so it was the lower extremities in which the joint disease occurred most frequently. The arms of a cooper were more likely to be the site of joint disease owing to the excessive use of those limbs. We owed a great deal to Charcot, and the miliary aneurysms as causes of central hæmorrhage were specially mentioned in this relation. In answer to Sir Andrew Clark, he said that he agreed almost completely with the views of Dr. Pye-Smith in believing that a new disease was impossible.

Dr. CHARLTON BASTIAN said that his own experience of Charcot's disease was limited, though he had been on the look out for it since 1868, and had seen very many cases of locomotor ataxy. He concluded, therefore, that the joint disease was not a necessary appanage of the ordinary lesions of locomotor ataxy, and this was precisely Charcot's position. He believed that when the joint disease was present there must be an extension of the ordinary pathological process either into the anterior grey matter or elsewhere. Some points seemed to have been lost sight of by Dr. Moxon and Dr. Pye-Smith. The ordinary lesions of locomotor ataxy are situate in the posterior columns of the cord, and if it be such a common disease as we have every reason to suppose it is, it is strange that the joint affection is so rare. Such considerations must tend to throw considerable doubt on the views which attribute to loss of sensibility and to spasmodic action of muscles a share in the etiology of the disease. Moreover, the joint disease frequently manifests itself at the very early stages of locomotor ataxy; at other times it comes at irregular periods of the disease. The influence of neural disturbances in the causation of simpler joint affections was well seen in certain cases of hemiplegia. A simple arthritis may come on in the limb only on the paralysed side; there was tenderness over the nerve trunks, with atrophy of muscle. Such conditions were associated with sclerosis of the lateral columns of the spinal cord, and in some cases recorded by Charcot there was extension from the sclerotic region into the contiguous grey matter, and it was to this extension or coincident changes in the nerves of the limbs that the arthritic disease was probably due. Sometimes joint changes occurred in the course of progressive muscular atrophy, and a remarkable case in which there was an unusually rapid onset was narrated. The pain, tenderness, and inflammation of the joints led to the diagnosis of rheumatic fever by the doctor in attendance. During the past two years it had been shown that the ordinary kind of symptoms of locomotor ataxy may exist without central changes, for there were only peripheral lesions to be detected. Future investigation would have to decide on the precise relation of the association, but we need not postulate the existence of special trophic nerves, for the cutting off of ordinary nerve impressions was sufficient to bring about secondary degeneration in the brain and spinal cord as well as atrophy of muscles with fatty degeneration. Perhaps one-half of the trophic lesions owed their existence to this absence of neural incitations, whilst a large proportion might be produced by unnatural influences passing along sensory nerves, these influences arising from changes in their tract or at

their roots. Cutaneous eruptions, damage of the cornea, and the peculiar atrophies described by Sir James Paget probably owned this pathology. There was no reason why sensory nerves should not transmit impressions in the opposite direction to their usual one. The joint affection may be due to disorder of the sensory nerves or nuclei; he threw this idea out as a suggestion. At present it was impossible to go further in the direction of a precise pathogenesis. The notion that it was a new disease was diametrically opposed to the conclusions of Charcot and to his own views; it was simply that the disease had not previously been recognised, for we could not doubt that the same kind of influences were at work in every period of civilisation.

Mr. HOWARD MARSH referred to the interest which Sir James Paget had introduced into the debate by his remarks on the subject of the evolution of disease. As neither Hunter, Langstaff, nor Stanley had left behind any specimen of Charcot's disease, Sir James concluded that the disease was new, and that it had arisen out of the mingling of constitutional affections like syphilis, rheumatic gout, and a special tendency to disease of the spinal cord. Stanley worked at diseases of the bones down to 1850, so that by Sir James's argument the affection must have become prevalent only within the last thirty or forty years. But the work of Paget himself extended down to at least 1865, and, as it was as unlikely that he had overlooked it as that Stanley had, we must, by this argument, hold that it was new since 1865, a conclusion more difficult to accept than that Hunter had overlooked it. The theory of recent evolution seemed untenable on three grounds. First, he could not see from what elements it had been so lately produced, for syphilis, osteo-arthritis, and nervous diseases had been mingled long before even Hunter's day. Secondly, the time—less than even a single natural life, and less than even two generations—assigned by Sir James was probably too short for the evolution of a new disease presenting such remarkable features as Charcot's disease. Thirdly, in any process of evolution the original form gradually faded out and the new form took its place; but syphilis, for example, had remained unchanged for at least a hundred years. Osteo-arthritis and Charcot's disease seemed to him closely allied, not only pathologically, but even clinically, if the whole group instead of extreme cases were compared. He was aware that the argument that because two diseases could be connected by a number of intermediate links there was no essential difference between them must not be carried too far, for this was a form of argument by which it was easy to show that there was no difference between a saint and a sinner or between black and white. Still it was entitled to considerable weight when the intermediate cases were carefully selected. He had recently seen a case of disease of the hip-joint which began ten years ago as a well-marked example of osteo-arthritis, but which had very gradually acquired the characters of a typical Charcot's joint; yet the patient had no symptoms of disease of the nervous system. We were at present ignorant of the true nature of osteo-arthritis—whether, as many thought, it was a disease of nervous origin, or, as others suspected, himself among the number, a common name for several distinct affections not yet distinguished from each other; and thus we were not in a position to say how, if at all, Charcot's disease was related to it. Charcot's disease seemed, as Dr. Buzzard had remarked, to be located primarily in the bones, which underwent an active and destructive alteration. No bones that were suffering merely from deficient repair would present the features observed in these cases. Mr. Hutchinson had shown a skull and lower jaw in which, corresponding to the distribution of the fifth nerve on one side, the several bones were intensely hard, greatly thickened, and deformed by irregular nodular swellings. Such an example seemed to point to some abnormal influence of the nervous system. To the naked eye the changes of Charcot's disease somewhat resembled those found in mollities ossium, in which the bones become rarefied, brittle, soft, and easy of fracture. Somewhat similar changes were to be seen in some cases of fragilitas ossium. The origin and true nature of such diseases, including the osteitis deformans of Sir James Paget, were altogether obscure. Charcot's disease must be compared in every way with such diseases, and its own features must be carefully worked out before its true position in pathology and clinical medicine could be determined.

Dr. BARLOW asked whether, with regard to the view that Charcot's disease was indistinguishable from rheumatoid arthritis, the latter affection itself was so definite a clinical entity. Does such an association of the diseases add anything to our knowledge? Look at the different ways in which rheumatoid arthritis begins. First, in some cases it was impossible to distinguish it from senile degeneration, and senile degenerations of cartilage may be very extensive at the ends of bones and practically free from pain in old people. It could not be denied that acute rheumatism did sometimes develop rheumatoid arthritis. Heberden's nodes were sometimes associated with deposits of urates of soda in the joints, as shown recently by Dr. Dyce Duckworth; the coexistence of gout and rheumatism was spoken of by Hutchinson, but it was also a tenable hypothesis that the bony outgrowths were themselves due to gout. Dr. Barlow had seen malum coxæ senilis supervene on acute specific disease. The case of an old lady, who had a virulent attack of scarlet fever which was followed by changes in the knee and hip, was narrated. Another case had supervened on an attack of measles in a child. Gonorrhœal rheumatism was said by some not to be distinguishable anatomically from rheumatoid arthritis. He had observed two cases of spondylitis deformans in individuals aged forty; acute rheumatism in one and gonorrhœa in the other seemed to have played a part in the causation. Rheumatoid arthritis had also been shown by Dr. Ord to begin in connexion with dysmenorrhœa. Thus rheumatoid arthritis is merely an anatomical term, meaning a condition brought about by a great many processes. The life history was the thing which must come into play in judging of the nature of a morbid process. He had observed affections of joints in cases of hemiplegia, progressive muscular atrophy, and infantile palsy. In a case of old-standing infantile palsy the hip-joint may show decided resemblances to tabetic arthropathy in the mobility of the joint, the looseness of the ligaments, and the atrophy of the upper end of the femur. Sometimes, in the *acute* stage of infantile palsy, he had observed swelling round about joints, associated with tenderness, redness, and heat of skin, occurring within the first two weeks of the febrile illness; the swelling was more like gout than anything else, and came within the circle of the febrile disturbance of the affection. In a case of myelitis in a young lady, which came on with the symptoms of spinal apoplexy, an effusion in the knee-joint appeared and subsided three times. Brain disease was also associated at times with similar arthritic changes. With regard to the *modus operandi*, he concurred with the views of Dr. Bastian, that much further investigation was required, but that it seemed probable that joint changes might arise not only in connexion with central but with peripheral nervous disturbances.

Dr. BERNARD O'CONNOR spoke of the pathological conditions in dry arthritis, and contrasted the changes with those of Charcot's disease. The influence of nervous lesions in the causation of arthritic changes was also discussed.

Dr. HADDEN believed that Charcot's disease was a distinct and separate malady. The clinical and pathological evidence was sufficient to establish this conclusion. As to the disease being a new one, he had considerable doubt. A description was read from Stanley's work, in which there seemed to be abundant evidence to show that the case described was one of locomotor ataxy associated with joint disease, which seemed to be fairly typical specimens of Charcot's disease. Charcot had described changes in the anterior horns of the spinal cord; the multipolar cells were atrophied in parts just above the lumbar enlargement, and in the cervical swelling in cases of disease of the knee and shoulder respectively.

Dr. BASTIAN interposed to say that he knew of these changes, but he questioned what precise relation they had to the joint disease.

Dr. HADDEN, in continuing, believed that there might be some close connexion between the changes in the cord and the arthritic disease, for there was also rapid wasting of the muscles. He postulated the view that an anterior polio-myelitis of certain sets of cells was the cause of the joint disease.

Mr. HOPKINS discussed the possible influence of traumatic elements in the causation of the bone and joint changes of locomotor ataxy; the symmetry and anæsthetic state were spoken of as evidence in favour of traumatic influences. A case was referred to in which there was effusion into the thigh and into the knee-joint, with laceration of ligaments and fracture of bones.

Sir ANDREW CLARK said that the Society was to be congratulated on the way in which the discussion had been initiated, continued, and completed. It had been a most interesting and important discussion, for more varied and distinguished visitors had never joined in a debate. It was further a pronouncement of English opinion, and communicated to the busy practitioners accurate, extensive, and important information. Moreover, he hoped that it would do justice to a distinguished foreign physician to whom we owed so much. It might be interesting at this period to pass in review the opinions of the various speakers but that this had already been so ably done by one of the medical journals (THE LANCET). Another method of studying the debate was to collect and contrast the ideas which have been evolved during the discussion. Despite the wish of Dr. Broadbent and others, Sir Andrew forbore to take further part in the discussion, averring that he considered it inconsistent with the functions of the Chair.

Mr. MORRANT BAKER said that he should not reply *seriatim* for fear of being accused of "emptying the church down to the sexton." Chronic osteo-arthritis was neither rheumatism nor gout. He considered Charcot's disease was a fairly definite disease, and characterised by the same pathological changes as chronic osteo-arthritis. It was not fair to take out-of-the-way cases. If typical specimens of the affections were taken, no real distinction could be found to exist pathologically. He did not think that Charcot's disease was an accidental combination of chronic osteo-arthritis with tabes dorsalis. It was impossible that we could expect the clinical symptoms to be the same in all cases. He referred to a case under Mr. T. Smith's care, in which the hip-joint was diseased in a manner precisely like that of Charcot's disease, but there were no symptoms whatever of tabes dorsalis. He had had the rare experience of finding Charcot's disease in cent. per cent. of the cases of locomotor ataxy which had come under his care. In Charcot's disease the small joints were affected; there might be eburnation of bone and fibrous degeneration of cartilages, so that he could not agree with Mr. Barwell. He did not concur in the belief that the disease was a new one. The differences from chronic osteo-arthritis were not so startling, and he believed that Charcot's disease had been overlooked because it was uncommon. The rare specimens might have been thrown away on Mr. Lucas's showing. With Mr. Hutchinson's view on premature senility he fully agreed. The term "rheumatic arthritis" might with advantage be discarded. Words were made to be our servants, but after they were once created they might become our masters. He would like to see invented a term which would imply "decay without repair" without ambiguity. In many of the cases the joints had not been subjected to any unnatural friction, and so he opposed the theory advanced by Dr. Moxon and others. He believed that the disease had nothing to do with syphilis. It was said by Dr. Moxon that the charm of genius was to play around the ordinary, and he considered that the speech of the author of that phrase was an admirable example of its truth. He thought with Mr. Hopkins that injury had something to do with the causation of Charcot's disease, and fractures of bones in tabetic patients. It was not for him to dogmatise, but he still maintained that Charcot's disease was most probably an osteo-arthritis occurring in tabes dorsalis.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WE are asked by one of the Secretaries of this new Society, Dr. Fancourt Barnes, to publish the following:—

At a meeting held on Dec. 27th, at the rooms of the Medical Society of London, under the Presidency of Dr. Routh, the British Gynæcological Society was instituted after some discussion. The following is a list of the officers who were unanimously elected by the meeting:—Honorary President: Dr. Robert Barnes. President: Dr. A. Meadows. Vice-Presidents: Drs. Aveling, Granville Bantock, Routh, Protheroe Smith, Mr. Lawson Tait (Birmingham), Professor A. R. Simpson (Edinburgh). Council: Dr. Sinclair Coghill (Ventnor), Dr. Grigg, Messrs. T. Nunn, Noble Smith, H. A. Reeves, Drs. Walter and Lloyd Roberts (Manchester), Dr. Purefoy (Dublin), Mr. Paul Swain (Plymouth), Drs. Macwhirter Dunbar, A. Sheen (Cardiff), T. More Madden (Dublin), John Wallace (Liverpool), John Thorburn (Manchester), with others to be added at the first general meeting. Treasurer: Dr. A. W. Edis. Hon. Secretaries: Drs. Heywood Smith and Fancourt Barnes. The first meeting of the Society will be held in April.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Dec. 18th, 1884, Mr. W. A. Garrard, President, in the chair.

Dr. KERLING introduced a patient whose Scapula had been removed nearly two years before for a Tumour involving the Bone and surrounding Muscles. There had been no return of the disease and the arm was a fairly useful one.

Dr. KERLING also showed a youth whose Left Arm had been nearly torn off and his Skull Fractured by a machinery accident. After necrosis of two inches and a half of the shaft of the humerus the ends of the bone had been tied together with wire, and splints applied. Complete recovery has taken place, the patient being now able to work at his trade as usual.

Dr. KERLING exhibited a woman in whom one half of the Scalp had been torn off in consequence of her hair being caught by a revolving machine band. The complete healing of the raw surface had been much aided by repeated skin-grafting.

Dr. DYSON exhibited a patient with Aortic Disease. His age was forty-five, and he was a brewer's drayman. The interest of the case consisted of a loud high-pitched musical diastolic murmur, the maximum of intensity being over the lower part of the sternum; the murmur was audible all over the front of the chest and in the back, also in the large arteries. There was also a systolic aortic murmur. A thrill of the same distribution as the murmur was also present. Signs of the above commenced last Easter, but it was not until Dec. 1st that the patient left off working. On that day he had a sharp anginal attack.—Remarks were made by the President, Dr. Banham, Mr. Barber, Dr. Porter, Dr. Keeling, and Mr. Baldwin.

Dr. DYSON showed a Heart from a man aged twenty-five. History of rheumatic fever many years back, but only subjective symptoms of heart disease for four years. The heart, which weighed nearly two pounds, showed signs of pericarditis, dilatation, and hypertrophy of the left auricle and left ventricle, disease of the aorta and aortic valves, also well-marked mitral stenosis. The prominent symptoms and physical signs during life pointed to aortic incompetency. A mitral murmur was present but not well defined. The kidney also was shown; it was large and cirrhosed. The liver and spleen were immense. Convallaria was administered in this case, and seemed to act quite as well as digitalis. The urine was albuminous.—Dr. Porter and Mr. James made observations.

Dr. BANHAM introduced a patient whom he considered was suffering from Tumour of the Brain. There was partial hemiplegia with some anæsthesia of the left side, slight paresis of the right side, deafness of the left ear, nystagmus of the left eye, and atrophy of both optic discs, especially of the left. Headache and vertigo were also occasional symptoms. The defect of sight and hearing had been progressing for the last four years, but no paralysis beyond slight weakness of the left arm appeared until January last, when one night he was suddenly seized with cramps and rigidity of the limbs, followed in a few hours by left hemiplegia. The affection of the right side had slowly developed since. The history of the patient and the negative results following specific treatment were entirely opposed to the hypothesis of the syphilitic nature of the disease, and Dr. Banham inclined to the opinion that there was a tumour of the pons Varolii, implicating also the cerebellar peduncles, and that the sudden augmentation of his symptoms in January last was due to hæmorrhage in connexion therewith.

Dr. BANHAM also gave brief notes of a case of Urticaria, occurring in an intelligent woman of twenty-five years of age, which had recurred almost daily for two years past, and which had been accompanied frequently with dysphagia to such a degree that when she sat down to a meal swallowing was often found impossible, and the attempt induced such serious attacks of choking as greatly to alarm those about her. The patient had never given any indications of hysteria. He saw this patient for the first time three weeks ago, gave her careful directions in regard to diet and the regulation of the bowels, and ordered her a mixture of bismuth and nux vomica, to be taken before meals. Within

a day or two the attacks of urticaria subsided as well as the dysphagia. He thought it not improbable that the difficulty of swallowing had arisen from the mucous membrane of the throat being affected in a manner similar to that of the skin.—Dr. Keeling and Mr. Barber made remarks.

Mr. SIMEON SNELL exhibited a baby with Nævus at the Inner and Upper Angle of the Orbit, under process of cure by electrolysis; and showed also Priestley Smith's Model for Demonstrating the Horizontal Movements of the Eyes.

Mr. RECKLESS exhibited the specimen of an Ovum and its Decidual Membranes, of about eight weeks' growth, removed from a woman aged forty-one, the subject of old-standing retroflexion of the uterus. A peculiarity was that the ovum appeared to have been arrested at the entrance into the uterus, and developed in the corresponding corner; and that the placental portion formed a complete coat of the uterine cavity. A further point of interest was the vexed question of the possibility of pregnancy in a well-marked retroflexed uterus.

Reviews and Notices of Books.

A Treatise on the Continued Fevers of Great Britain. By CHARLES MURCHISON, M.D., LL.D., F.R.S. Third Edition. Edited by W. CAYLEY, M.D., F.R.C.P. London: Longmans, Green, and Co. 1884.

IT is now twenty-two years since the first edition of this work appeared—a work that speedily obtained a world-wide recognition, and established for its lamented author a reputation which was fully deserved. In 1873 he published a second edition, much amplified and extended; and now, after the lapse of another period of eleven years, appears this third edition, the preparation of which has been fittingly placed in the hands of his former colleague, the present Senior Physician to the London Fever Hospital, where Murchison gained so much of his experience on the subject. Much praise is due to Dr. Cayley for the judicious manner in which he has exercised his function as editor. He has not excised more than was absolutely necessary, and has been almost too sparing of additions; but, as he states in his preface, he "believed that he could best meet the wishes of the medical profession, as well as of Dr. Murchison's representatives, by making as few alterations as possible." In taking this course the editor has left the work, so far as its method and all its important details are concerned, practically as Murchison wrote it; and where additions have been made, they concern in the main the few points which have of late years received much attention. In one direction, that of the dependence of specific fevers upon the presence of micro-organisms, there has been less said than might have been thought necessary; yet it is evident that in Dr. Cayley's opinion the facts at present advanced on this head with regard to typhus and typhoid fevers do not warrant too firm an adhesion. As regards relapsing fever, the evidence is more precise; and Obermeier's discovery of the spirillum was made in the same year (1873) that the previous edition of Murchison's works was published. The description of this micro-organism, and the later investigations of Vandyke Carter and Koch, form therefore a distinct and necessary addition to the section dealing with the pathology of this disease. Seeing that this discovery was one of the first to be substantiated of the actual relation between a specific micro-organism and a disease, one is able to form some slight idea of the remarkable advances made in bacterial pathology within the past decade. In typhus and in typhoid fevers the evidence of specific microzymes is as yet very inadequate. Dr. Heneage Gibbes, who contributes to this volume an account of the typhoid micro-organisms, confesses that he has been unable to find any clear points of distinction between putrefactive bacteria and the so-called bacillus of typhoid (Eberth). He gives illustrations of these micro-organisms, but believes their specific function will be ultimately disproved. Moreover, he has found that they are very variable in number and distribution in the organs of typhoid fever cases. In another part of the work, Dr. Cayley, after speaking of the apparent necessity for putrefaction to take place in typhoid stools before these are rendered contagious, hints not obscurely as to the possibility of a conversion of putrefactive into pathogenic bacteria. A few quotations will best serve to illustrate his view. Thus, on p. 12, where Dr. Murchison speaks of the particulate theory of contagion and the *de novo* origin of fevers, the editor adds:—

"Since this statement of Dr. Murchison's views on the nature of contagion the discovery of the microbes of relapsing fever, anthrax, fowl cholera, hog typhoid, and probably those of malaria, tubercle, and other specific diseases, together with the results of inoculation and cultivation experiments, has afforded fresh support to the notion that contagious fevers are due to parasitic organisms, and this must now be regarded as, in all probability, the correct view of their nature. But this view by no means disproves the possibility of their arising *de novo*, apart from the theory of spontaneous generation, which few would be inclined to accept. For the researches of Pasteur and others have shown that the properties of these organisms may be modified in an extraordinary degree by placing them under different conditions; hence it is quite conceivable that the germs of a disease like typhoid or typhus fever might under ordinary circumstances be harmless, and only acquire virulent properties when under the influence of pent-up stagnating sewage, or overcrowding and imperfect ventilation, in the same manner as the bacillus of anthrax may be rendered more or less virulent by being cultivated with the access of more or less oxygen."

Again, speaking of the typhoid poison being produced by decomposing material, Dr. Cayley writes—

"Putrefactive decomposition is, however, always accompanied, and most probably occasioned by, the rapid development of micro-organisms, and as there are strong grounds for regarding the poison of enteric fever to be constituted by one of those organisms, it would seem highly probable that the putrefactive change is one of the conditions necessary for their development from the germs contained in the stools of cases of enteric fever."—p. 487.

These passages suffice to show the direction in which Dr. Cayley thinks we ought to seek an explanation of the apparent *de novo* origin of these fevers, as well as to link the now widely accepted germ theory with the facts of actual practical experience of the mode in which contagion may occur. Whether the views are such as will commend themselves to those who doubt the connexion here hinted at between putrefactive and pathogenic organisms we shall not attempt to decide.

Except in the particular of the spirillum, there has been little to add to the chapters of the work dealing with typhus and relapsing fevers. From the latter disease Great Britain has for several years past been almost free; and as to the former, the cases are now reckoned by tens where they used to occur in thousands. To be sure there are a few cities in this country where typhus still prevails to an unenviable extent; but in others, and notably in the metropolis, the fever is one which has remarkably diminished. So that of the three great "continued fevers" of Great Britain, of which this treatise affords so exhaustive a study, there is practically but one which still constantly confronts the practitioner. The editor finds, too, that most advances have been made in the knowledge of symptoms and lesions in this fever, and has thoroughly brought the work up to date. The most copious addition is that dealing with the antipyretic treatment (p. 656, *et seq.*), where the methods and results of cold bathing are clearly and concisely stated with illustrative cases, and a like discussion of recent antipyretic remedies—notably kairin—is introduced. Thus, judiciously edited, the work retains all the characteristics which Murchison impressed upon it;

and those who have not yet perused it may well turn to this edition without fear of missing any of the wide and scholarly erudition, the careful and exhaustive descriptions of clinical, pathological, and etiological facts which served to give it from the first an unrivalled place in our literature, a position which it is likely to retain. The time may come, if the sanitarian is to be believed, when the matters treated of in this volume will have little more than historical interest, like the Plague or the Black Death. Such a consummation is, however, very remote, and many generations of practitioners will be led to seek in this treatise for the knowledge which will enable them to deal with disease that may daily confront them.

A Text-book of Human Physiology, including Histology and Microscopical Anatomy. By DR. L. LANDOIS, Professor of Physiology in the University of Greifswald. Translated from the Fourth German Edition, with Additions, by WILLIAM STIRLING, M.D., Sc.D. Vol. I., pp. 514, with numerous Illustrations. London: Charles Griffin and Co. 1885.

THIS work, which enjoys high repute in Germany, is admirably adapted for the practitioner; whilst giving an excellent summary of the present state of the science of physiology, the author never forgets the practical side of his subject, and the advantages which the treatise offers in this respect are so great that notwithstanding it is one of the largest text-books on physiology, being exceeded only, we think, by Longet's work, and perhaps by the new edition of Funke, which threatens to appear in three huge volumes, it has yet passed through four large editions in the same number of years. It has been translated by one who is well known for the scientific work he has accomplished, and who is in all respects competent for the very serious task he has undertaken. Dr. Stirling has materially added to the value of the work by inserting a very considerable number of illustrations, and by introducing in brackets many facts which render the subject more intelligible, and which have either been overlooked by the author, or have been made out since the German edition was printed. As examples of this, we may instance the account of the oncograph, under the head of the spleen; of Meade Smith's method of making an intestinal fistula; of the structure of Brunner and Peyer's glands, and of the solitary follicles; of the fluids contained in serous sacs; of Hammarsten's theory of the coagulation of the blood; of Luciani's experiments on the cardiac pulsations; of the nature of a cardiac contraction, and many others.

The plan adopted by Landois may be illustrated by a short account of the mode in which he treats the important subject of respiration. He commences by a brief account of the histology of the bronchi and lungs, to which, as in so many other places, extension and important additions are made by Stirling, comprising the observations of Dêbove, v. Drasch, Hamilton, Klein, and of Stirling himself, on the lungs and on the pleura, with two instructive and original woodcuts. Then follow in succession the mechanism of respiration; an account of the quantity of gases respired, and the circumstances modifying the vital capacity; the number of respirations and the conditions influencing them; the time occupied by the respiratory movements, to which Stirling adds a figure with description of Marey's stethograph or pneumograph; the pathological variations of the respiratory movements, which is a valuable section, treating of dyspnœa, the Cheyne-Stokes' phenomenon, and Harrison's groove; a general view of the respiratory muscles with their nerve-supply; the action of the individual respiratory muscles; the relative dimensions of the chest, so important from a physician's point of view, with the pathological variations of the percussion sounds; the normal respiratory sounds, with their pathological variations; the pressure in the air-passages during respiration; peculiarly modified respiratory movements, as coughing, sneezing, and the like; the chemistry of respiration, including the composition of the air, the daily quantity of gases exchanged and the conditions modifying the gaseous exchange, the diffusion of gases within the lungs, the dissociation of gases; cutaneous respiration; internal respiration; respiration in a closed space; dyspnœa and asphyxia; respiration of foreign gases; effects of accidental impurities in the air; ventilation of rooms; formation of mucus in the respiratory passages and the characters of pathologically modified sputa, which is illustrated by a good woodcut showing the various objects found in sputum; the action of the atmospheric pressure; the section ending with a brief comparative and historical notice. This enumeration will suffice, we think, to show the exhaustive and eminently practical manner in which the subject of respiration is treated, and, to avoid confusion, we have omitted any reference to the very numerous points which are elucidated by a line or two, and sometimes by a whole paragraph, from the pen of the translator. With this, and the numerous other text-books on physiology at his command, no student should, we think, fail in his examination on this subject.

The Medical Student's Manual of Chemistry. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Toxicology in the University of Buffalo, &c. London: Sampson Low and Co. 1884.

DR. WITTHAUS has given to the medical profession a book which has long been wanted, a simple manual of chemistry, in which matters important to medical science are kept systematically in the foreground. The teacher, and still more the examiner, are apt to forget that chemistry is but a small part of the work of the medical student. It is impossible to overrate the importance of that part, but it cannot and ought not to be a very large part. To demand from the student of medicine a knowledge of all departments of chemistry is unreasonable, and tends naturally to induce flimsiness in study. A good deal of general knowledge is of course essential to the comprehension of the laws of the science, and we are by no means anxious that the student shall attempt the impossible task of learning the applications of a science the principles of which he does not understand. But, on the other hand, he is often compelled by the exigencies of the examination to "get up" a great deal that has no bearing at all on the future work of his life, and is quite unnecessary for the illustration of chemical theory. What possible good is there in compelling a medical student to learn the details of manufacturing chemistry? Is it likely that he will wish to manufacture carbonate of soda or to smelt copper ores, and, if he does, will he ever attain sufficient knowledge from any hospital course? His time at the hospital is very precious, and at present it happens that so much of it is wasted by purely irrelevant studies that he is seldom able to study properly the actual bearings of science on his own profession.

Dr. Witthaus has made a praiseworthy attempt to supply a sensible course of instruction for students of medicine, and we think that, on the whole, he has succeeded. He has cut out all, or nearly all, that he could from the time-honoured course. His descriptions of manufacturing processes are brief and confined almost entirely to general principles, and he has reduced to a minimum the history of many elements—silicon, for example—which have no importance in medical science. On the other hand, the space so gained has been filled with details of practical value to the physician. Toxicology is interwoven with the text, and a good deal of pharmaceutical and physiological chemistry as well. Thus, many pages are given to arsenic, phosphorus, mercury, and in each case methods of special analysis and an account of officinal preparations are given,

The arrangement of the elements is peculiar, and we doubt whether it is in all cases convenient. The greatest novelty is the inclusion of carbon and the so-called organic chemistry in the systematic orders of classification. About one-half the book is really given to organic chemistry, but it comes in the middle of the book after the non-metals, among which arsenic and antimony are included, and before the metals. Of course, no classification can be perfect, but this appears, on the whole, to be the best. The carbon or organic portion of the book is very good, although by no means beyond criticism. It was, for example, wise to arrange the series according to the hydrocarbon type, starting from the paraffins, but unwise to adopt the old-fashioned name of hydride for the paraffins. Schorlemmer has shown that marsh gas is no more entitled to the name of methyl-hydride than to that of methylene-hydride, or methenyl-hydride. The convenient name of methane suggested by Hofmann is now generally adopted.

We have little wish to point out errors or omissions in so good a book, as most of them are certain to disappear in the next addition. We may, however, venture to remind the author that the isolation and liquefaction of ozone, the chromic acid test for peroxide of hydrogen, the dissociation of iodine, and the use of the endiometer in analysis are matters too important to be omitted. We must notice, too, a grave error on page 174, line 5, where 180 parts of glucose are represented as yielding 44 instead of 88 parts of carbonic acid. There are, indeed, a good many inaccuracies which must be corrected if the book is to take permanent root as a text-book.

New Inventions.

NEW SELF-ADJUSTING TONGUE-DEPRESSOR.

THE engravings illustrate the construction and application of the tongue depressor. The instrument is self-adjusting, and when placed in position the operator can use both hands for any manipulation. It consists of two metallic plates in combination with a wire recoil spring. The larger or tongue plate is polished on the upper surface, and this assists in the illumination of the mouth; and on the under side it is roughened, to prevent it slipping forward

on the tongue. The smaller, or submental plate, is curved to fit easily and securely under the chin behind the maxillary symphysis. The wire spring occupies very little space, and is bent downwards so as to be out of the way of the surgeon. The blades can be easily opened, and to assist their expansion a loop of wire is fixed on each side of the spring to support the thumb and finger.[1] The instrument can be employed for depressing the tongue in any position, and therefore it will be found serviceable in minor operations about the mouth, and also in rhinoscopic and laryngoscopic examinations. The submental pressure is especially useful in patients who are intolerant of oral instruments, and this method of fixing the tongue often appears to reduce the reflex irritability of the parts. The tongue

depressor is very neatly made by Messrs. Maw, Son, and Thompson in three convenient sizes, and can be obtained from that firm at a very moderate price.

J. WARD COUSINS, M.D. Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

[1] These wire loops are not shown in the engraving.

COTTAGE HOSPITAL CONSTRUCTION.

To the Editor of THE LANCET.

SIR,—My attention has been called lately to several new cottage hospitals which have been erected within the last few years, and which have been designed upon the pavilion principle. In the second edition of my book on Cottage Hospitals I published a plan of a model hospital for fifty beds, constructed upon this plan, but I omitted to caution the inexperienced that the pavilion system is too costly and extended for hospitals having less than fifty beds. In several of the more recent cottage hospitals the extravagance of the pavilion system for institutions with less than fifty beds is demonstrated. I have just received the particulars and conditions of two new hospitals, one at Newbury and the other elsewhere, which have been thrown open to competition, and this has induced me to ask you to be good enough to call attention to the facts here stated, and to allow me to suggest an alternative plan, based upon an exceptional experience, combined with a careful consideration of the faults apparent in several of the more recently constructed cottage hospitals.

Briefly, the plan which seems to me to be preferable to the pavilion system for small cottage hospitals is one designed upon the straight model. This will enable all the wards to be placed upon the ground-floor, with perfect cross ventilation. The matron's and nurses' rooms and the bath and operation rooms will also be provided on the same floor. Upstairs there will be the kitchens, with sleeping accommodation for the servants and staff. A lift communicating with the kitchens and ground floor should be provided. To secure the complete isolation of the kitchens when necessary, and to avoid many evils which might otherwise arise, a special staircase should connect the outside and back portion of the premises with the kitchen, by which access could always be obtained to the latter without entering the hospital. This plan also affords the widest scope for future extensions, should such be necessary at any time. I have made a calculation from which it appears that a hospital, with from eight to twelve beds, constructed upon this principle, may be built at two-thirds of the cost of one with the same number of beds constructed upon the pavilion plan, which is now so popular. I would send you a plan of my new design, but I fear you would hardly be able to find space for it in your correspondence column.

I am, Sir, yours truly,
HENRY C. BURDETT.

Gloucester-road, Regent's-park, N.W., Dec. 30th, 1884.

THE LANCET.

LONDON: SATURDAY, JANUARY 3, 1885.

WE trust the year 1885—though opening in somewhat anxious circumstances—will prove a happy one for the nation and the profession. In many respects it is likely to be at least an interesting one to the profession, both in educational and in scientific matters. It is obvious that the "medical authorities"—to use the language of the Medical Act—in the different divisions of the kingdom are behaving as if a new departure were being taken and a new lease of privilege granted to them. The undertaking of the Scotch and English corporations to forego their right of granting their lowest diploma, *singly*, cannot fail to be followed before very long by similar action on the part of the Irish corporations. This welding of the licensing authority in each division of the kingdom, though not brought about in the way we had desired, and by no means so thorough as we could wish, ought to be followed by consequences of great moment to the profession. The competition between individual licensing corporations in each division of the kingdom will cease. Unfortunately, competition between united corporations in one part of the kingdom and united corporations in another part will continue, as well as a certain tendency to vulgar competition between universities granting degrees and corporations granting diplomas. But we must be thankful for small mercies till the House of Commons shows itself capable of legislation worthy of the name. So we shall charitably assume that, with a consolidation of the examining boards and an apparent reduction in the number of competing "interests," examinations will be really improved in regard to fairness as well as severity, and that medical education will gain in thoroughness. We may venture to hope that such a change in the examining bodies will have the effect of lessening the rush into the profession—the more so as, Sir LYON PLAYFAIR notwithstanding, the supply of the profession already exceeds its "waste" by several hundreds a year. There is one other "consummation devoutly to be wished"—namely, that the consolidated and strengthened bodies will have the consciousness of a little more strength to discharge the censorial and judicial functions which they owe to their members and to the profession at large. Such functions are fundamental and essential. The idea of Bodies that should license and authorise without controlling, or in case of need censuring, has no reasonableness either from the common-sense point of view or in the light of the history and traditions of the profession. The abeyance of censorial functions, however, is obvious, and is as painful as it is obvious. Every week members of some one or other of our great historical corporations are guilty of conduct which outrages all the traditions of the profession, and is practically fraudulent as regards the public. But action is seldom taken by the bodies whose diplomas are thus dishonoured; and the public suffers. It is surely not too much to hope that the corporations acting together will feel more strength and disposition to uphold professional morals and conduct. It will rarely be necessary to proceed to extremities. Many a man goes wrong, loses the respect of his professional brethren, and perhaps incurs their contempt, who might have been saved and kept in honourable and professional ways by a timely and kindly word from the censors of his College. Human nature is weak, and in the early days of professional anxiety and impecuniosity it sometimes needs a word of advice, and even remonstrance. Such a word is now scarcely ever spoken by the "medical authorities." For want of it a man often takes to courses which involve his removal from the Register. With the Conjoint arrangements of 1885 we hope for better things—not only for better education and better examinations, but higher professional spirit and conduct.

In scientific respects we enter hopefully upon the new year. There are many "worlds" of disease yet to conquer, requiring for their conquest not only the researches of the chemist and the physiologist, but the sound, steady, and sustained observations of the practitioner. There is no excuse now for any practitioner not contributing something to the great and ever-accumulating sum of medical knowledge, and still less for his not making daily additions to his own stock of practical and scientific data. The best thoughts of the best minds are our common property in these happy days of professional and scientific journalism. The opening year is full of promise. But, according to our forecast, it is full of duty. Medical problems of vast interest to mankind are pressing for solution. New remedies claim attention. New methods of treatment are replacing old ones. Even "new diseases" are spoken of by such experienced and keen observers as Sir JAMES PAGET. And old diseases, over which we had fondly hoped that Science had asserted its control, still display their ancient virulence. We have great battles yet to fight, not only with disease, but with popular ignorance and, alas! with cultivated ignorance.

LAST week we published a brief and general statement of the answer given by the Council of the Royal College of Surgeons on the 19th ult. to the recommendations of the Association of Fellows. The exigencies of space required a statement so concise that we were prevented from recording the various limitations, qualifications, and excuses which were made use of by the Council in accepting, modifying, or rejecting the recommendations of the Association of Fellows. These limitations, qualifications, and excuses do, however, form the most interesting portions of the Report of the Committee of the Council that was appointed to consider the recommendations. If the result arrived at by the Council be tried by an arithmetical test, it may be pronounced tolerably satisfactory, inasmuch as the Council has accepted, with or without alteration, *nine* recommendations, and rejected only *seven*. With this balance of two recommendations in its favour, some may think the Association of Fellows should felicitate itself and be thankful. Unfortunately, others may think that political problems cannot be solved in this simple manner. Quality as well as quantity has to be considered; and if the answer of the Council be looked at in this light, it is scarcely an exaggeration to say that the less important recommendations of the Association of Fellows have been accepted, while the more important

have been rejected. Indeed, the result might be formulated thus: *The less important the recommendation the more perfect the acquiescence of the Council therein; the more important the recommendation the more complete its disapproval.* An illustration or two will establish the general truth of this proposition.

The Association of Fellows recommended what had previously been adopted at the general meeting of Fellows and Members held at the College last March—namely, that there shall be an annual meeting of Fellows and Members at which the Annual Report of the Council shall be *presented, discussed, and, if approved, adopted.* The Council has adopted the minor part of this recommendation, but rejects the graver. The meeting may be held and the report may be presented, but it shall not be discussed. Surely this is solemn trifling! An annual meeting might have been held any time during the last fifty years; no alteration in any Charter or Bye-law is needed for holding it, as such meeting will be held under Section XVIII. of the existing Bye-laws, which was adopted fifty-three years ago, and, curiously enough, adopted expressly to prevent such meetings. And as to the Report of the Council, nothing will be gained by mere presentation: it is already *presented* every year in the College Calendar, under the title, "Secretary's Report." Again, the Association of Fellows recommended that on the receipt of a requisition signed by thirty Fellows or Members, the President shall convene a meeting of Fellows and Members. The Council falls back upon one of its notorious Resolutions, and is willing that a meeting may be held on requisition, "*provided that the objects of such meeting be approved by the Council.*" Lastly, of the recommendations accepted by the Council, the Association suggested that the Minutes of each meeting of the Council shall be suspended in the hall of the College for the inspection of Fellows and Members. Here, too, in affecting to accept the recommendation the Council inserts a condition which stultifies the concession. Only the "confirmed" Minutes are to be so suspended; in other words, those Fellows and Members who take an interest in what the Council does may from time to time know what it *has done*, not what it is doing or going to do. The Fellows must indeed be "coy and hard to please" if they be not content with being told in the middle of October what their representatives in the Council did in the middle of July or August. In any case, we cannot too highly extol the courtesy and grace of the Council in allowing the Members of the College ever to have an inkling of what has been done.

Thus it is with some of the recommendations which the Council has accepted. The conduct of the Council is, however, still more remarkable in respect to the recommendations it has rejected. Among the more important of these recommendations of the Association of Fellows are—(1) That not more than one-half of the members of the Court of Examiners shall have seats in the Council; (2) that the President of the College shall be elected annually by the Fellows; and (3) that no alteration in the constitution or relations of the College shall be made without the consent of the Fellows and Members convened to discuss such alteration. To anyone outside the Council these recommendations may seem not only reasonable and just, but directly conducive to the dignity, prosperity, and permanence of the College. But within the Council another opinion prevails, and it has pronounced against alteration. Hitherto the Council has adhered to the custom of always electing the senior member of the Council to the presidential chair; and it cannot be denied that in many cases the result has been unexceptionable. Not seldom, however, the result has been the reverse of satisfactory. There are not a few persons who believe that the custom is in itself clumsy and capricious in operation, and often in its effect derogatory to the dignity of the office of president. Judged by some instances in the not very remote past, it may safely be predicted that no election made by the whole body of Fellows could possibly be less fortunate than some of the elections which the Council has made. The contention has at least plausibility that if the Fellows were to elect the President the chances would be greatly increased that the choice would fall on the fittest—fittest not only as regards personal qualities and public spirit, but fittest also as regards professional eminence and administrative capacity. The advantages likely to accrue to the College from such a free, unprejudiced, and impartial election of the President, would doubtless be as great as its promotors anticipate. But probably even these advantages are small when compared with those that would ensue if the Council were rendered more independent of the selfish and personal influences of the paid examiners *in posse* or *in esse*, who now dominate the Council; and if, further, the legislative functions now monopolised by the Council were shared with the whole of the members of the body corporate. The particulars of the very vote recorded at the last meeting of the Council against one of the recommendations of the Association of Fellows demonstrate the evils that attend a preponderance of the influence of examiners in the deliberations of the Council. By the nature of their office, examiners are personally and pecuniarily tempted to be more zealous in maintaining the *status quo* than in favouring changes that might, among other things, curtail their own privileges and emoluments. When the motion was put that the President should be elected by the Fellows, only five members of the Council voted in favour of it, while fourteen voted against it. It is noteworthy and significant that of the five who voted for it—namely, Messrs. ERICHSEN, HOLMES, and CADGE, Sir JOSEPH LISTER, and Mr. ALLINGHAM—not one is at present an examiner, and only two have ever held the office; while of the fourteen who voted against it—namely, Sir JAMES PAGET, Messrs. MARSHALL, FORSTER, SAVORY, LUND, WOOD, POWER, BRYANT, HULKE, and CROFT, Sir WILLIAM MACCORMAC, Messrs. LAWSON, HILL, and DURHAM—no less than ten are, or lately were, examiners, and three of the other four were applicants for the last vacancies in the Court of Examiners. These facts speak for themselves, and will assuredly justify the Association of Fellows in refusing to accept the latest answer of the Council as final. The other principal recommendation of the Association rejected by the Council is of still graver import—namely, that no alteration shall be made in the constitution or relations of the College without the consent of the Fellows and Members specially convened to consider such alteration. The Council, in total disregard of the political and social

teachings of the times, naïvely answers that if such alterations were subject to the approval of the Fellows and Members, the proceedings of the Council would be rendered inconclusive, and the business of the College could not be carried on. It therefore adopts the complacent opinion "that the government of the College should still be vested in the Council." It is perhaps only natural that the Council should desire to keep the management of the College entirely in its own hands; but even this anxiety will not excuse such astute politicians confounding the distinct and separate functions of legislation and government or administration. As we understand this particular recommendation of the Association of Fellows, it was not designed to take the *government* of the College out of the hands of the Council, but merely to ensure that the whole of the Members of the Corporation should participate with the Council in *legislation*, or law-making. The absurdity of the position taken by the Council becomes manifest when it is remembered that some alterations in the constitution or relations of the College cannot be made except by an Act of Parliament, and none can be effected without the sanction and approval of one of the principal Secretaries of State. Thus the matter at present stands: The Home Secretary, say, must in every case be satisfied as to the necessity and propriety of any proposed alteration; not so the eighteen thousand Members and Fellows of the College, who are commonly assumed to have some stake in the College, and are apparently the persons most intimately affected by the constitution and relations of the College. The Council, relying upon past experience, encourages the belief that the wishes of the Fellows and Members may be safely ignored, and even despised. Do the Fellows and Members themselves concur in this opinion?

WE are able to present our readers this week with the sequel of the case of cerebral tumour submitted to operation, which has excited so much interest, even beyond the limits of the profession. We believe that a carefully detailed account of the case will be furnished in due course to one of the medical societies, and we must postpone until then any discussion of the value of the line of practice here followed out. The general features of the case are, however, well-known. A young man, otherwise healthy, presented himself to Dr. HUGHES BENNETT suffering from paralysis of the left arm, frequently recurring spasms in the left side of the face and tongue and the left arm and leg, together with double optic neuritis, severe lancinating pain in the head, and obstinate vomiting. These symptoms had been gradually coming on for three years. Dr. HUGHES BENNETT inferred from this combination of symptoms the presence of a tumour close to the front of the upper part of the right fissure of Rolando, and at his request Mr. GODLEE exposed this part of the brain, cut into it, and removed as far as possible a gliomatous tumour about the size of a walnut. For a time all went well, the pain and vomiting were completely relieved, and the paralysis but slightly increased subsequently. A hernia cerebri developed and attained a considerable size, and after some few days the patient had a rigor followed by pyrexia, and died with meningitis and cerebritis spreading down from the lower edge of the wound to the base of the brain.

Unfortunately, someone who wisely concealed his identity under the signature of "F.R.S.," with more zeal than discretion, removed the discussion of this important case from the arena of science to that of the public press. In a letter to *The Times*, it was referred to as a test case of the value of vivisection, and with some assurance the gauntlet was thrown down to the opponents of this method of research. A long and on the whole unedifying rediscussion of this question has followed, which has done little more than give an opportunity to both parties to state their case, and which certainly has not advanced the position the question had previously attained. We have on many occasions expressed our opinion upon the general question of vivisection, and have nothing further to add on that point. We hold that the attempt to prove that it is essentially an immoral practice has not been successful, for man's right to turn the lower animals into means of his own advancement includes that of gaining knowledge from them, a right which is enhanced when that knowledge can be turned to direct practical use to man himself. We also believe that vivisection has been of distinct value in the advancement of physiological and pathological science, but that none the less it is a practice that should be most carefully regulated and watched, and guarded by any means which will lessen the amount of pain inflicted, and secure that the utmost care be taken in the experiments. It has been clearly shown that, so far as Great Britain is concerned, the practice of vivisection has been free from what may at all fairly be called "cruelty," and in the great majority of cases in which the experiments are painful the animal is anæsthetised. It is therefore grossly unjust on the part of those who oppose the practice always to refer to it in terms that can only apply to it as practised in some foreign laboratories, and as if "vivisection" and "torture" were equivalent terms.

It is simply impossible to deny that the precision of the diagnosis of the seat and extent of the lesion in the brain of Dr. BENNETT's patient would have been impossible a few years ago, and is a brilliant proof of the great advance recently made in this domain of medicine. Nor is it possible to contend that this advance would have been made without recourse to vivisection. It is true that clinical data taught the same lessons as Dr. FERRIER's experiments, but the point to be borne in mind is that Dr. FERRIER, unaided, was able in a few months to establish facts that would have taken years and generations of observers in all countries to determine by clinical data alone. By recourse to the experimental method our knowledge was obtained with a rapidity and a certainty that was impossible by other means. Undoubtedly Nature is incessantly performing experiments for us, and it is well when we can discern them; but her experiments lack the concentration and very often the precision of those performed in a laboratory, while they are in many instances witnessed by those unable to discern or appreciate the truths they teach. Hence what clinical experience did very slowly and withal imperfectly, HITZIG's and FERRIER's experiments did quickly and so powerfully that their lesson is now the property of every well-educated practitioner. To Dr. BENNETT must be left the task of describing the steps by which he was led to his precise diagnosis, but we can hardly think it possible that he would deny that it

was the knowledge obtained by experiment that chiefly influenced him. The clinical and surgical question raised by this case is one that must be very carefully discussed at a time when, and in an arena where, party feeling is wholly excluded, and we trust that no injudicious partisan will render this impossible by untimely action. For ourselves, we prefer to wait until we have a far more exact account of all the details of the case than has yet been made public, before entering upon a discussion of so much moment.

DURING the last few years the views of the profession generally with regard to puerperal fever have assumed a definite form. The epidemic view of its nature which had been so long and so generally received, and which by its assumptions paralysed all efforts towards the prevention if not towards the cure of the disease, have been all but universally discarded, and the septicæmic view of the nature of the disease has taken its place. So long as the origin of the disease remained a mystery, so long was every effort to prevent it powerless, while the mystery surrounding it only increased the terror in which it was held. When its origin became known and the mode in which it spread recognised, the disease was shorn of a very great portion of its terrors. Although, when once it has made its attack, it still preserves much of its fatal character, yet we know now how to destroy its source and to a great degree prevent its onslaughts. Lying-in hospitals, which have been the scenes of its ravages, can now be conducted with as much freedom from risk to their parturient inmates as when they are delivered in their own homes. This is due to two factors—first, our increased knowledge of the etiology of the disease; second, that which naturally follows the first, our power of preventing it. This knowledge is not the result of a lucky hit, nor of work in the dark, but of careful and laborious inquiry conducted on scientific principles. The etiology of puerperal fever was first studied, then naturally followed the study of its treatment. Our present treatment of it, our power of preventing it, is the outcome of the investigations of PASTEUR, LISTER, and others. Puerperal fever is septicæmia—the result of infection of the wounds made in the parturient canal during labour. The uterus immediately after natural labour is aseptic, for it is a fresh surface which has not been exposed to infected air. The vagina, however, is not aseptic, but there are reasons for believing that the discharges in the genital passages, although capable of infecting others, do not infect the person who generates them; in other words, there is no such thing as self-infection in normal labour and lying-in. On the other hand, there is much evidence to show that infection is caused not only by the examining fingers and instruments, but also by the atmosphere. In favour of this view is the frequency of infection in primiparæ, for in them there are usually deep tears of the vaginal orifice and perineum, and consequently larger surfaces capable of receiving infection exposed to the air; while in multiparæ such surfaces are smaller and fever is less frequent. The prevention of puerperal fever resolves itself into the prevention of infection of the raw surfaces in and about the vagina; and this is done by the use of antiseptics, so as to disinfect the attendants and also the vagina. Soon after the use of antiseptics was introduced into surgery they were employed also in midwifery, and attempts were made to carry out LISTER'S practice in its entirety. Baths, the spray, vaginal and uterine injections, were had recourse to, and with good results. Such a practice, however, is not only not desirable, but in many cases is impossible. The spray and baths have therefore been discarded. The uterine douche has been found not to be free from danger, and it also has been abandoned, except under special circumstances, when it may prove of the greatest use. On the other hand, vaginal injections have been, and are, still largely used in cases of normal labour. With their use better results have been obtained than without them. Objections have been made to their regular employment, but these rest chiefly on theoretical grounds. It has been said that it is not possible to disinfect the genital passages by these means, but the fact remains that foul decomposing discharges can be washed away, the passages be rendered sweet, and the temperature permanently reduced in the course of a few hours from 104° to the normal, by disinfection of the uterus and vagina by irrigation. If in such cases the disinfection is not complete, yet in practice it proves sufficient and effectual to remove the patient from a state of the greatest danger to one of safety. Vaginal injections may not be universally necessary, but, in all large towns at least, they are a means of safety which should not be disregarded. The cases requiring disinfection of the uterus are of great rarity. All cases in which the discharge is offensive do not demand it; but if the discharge is offensive after the vagina has been irrigated, the uterus itself is foul, and its cavity should be washed out and disinfected. These measures should be regularly observed in all hospitals and in large towns, and in all cases in which manual or instrumental interference has been required.

Annotations.

"Ne quid nimis."

MEDICINE IN ART.

ASSUMING that Thackeray was justified in prescribing to painters and sculptors a "little more reading," with a view to enlarging their choice of subjects, may we suggest the history of the healing art as a comparatively virgin field for the exercise of their genius? It abounds in critical situations and dramatic episodes, nowhere so well told as in Puccinotti's "Storia della Medicina" (4 vols., 1850-66), a masterwork far too little known in England, and strangely ignored in the "Encyclopædia Britannica's" latest article on the subject. Take, for example, the figure of Fabrizio d'Acquapendente, who stands at the close of the mediæval and the commencement of the modern period—of what an interesting group might not that mighty demonstrator and teacher form the centre? In the anatomical amphitheatre of Padua his class has just risen for the session, carrying away with them the noble Latinity of his peroration, with its impressive insistance on "Dissectio" (anatomy), "Historia" (recorded observation), "Actio" (function), and "Utilitates" (practical ends), as the "Quadrilateral" of medicine, when in come Galileo and young Harvey, arm in arm. Now for the painter's art! The scene is a spacious hall with an exit door to the spectator's left, and an entrance door to his right, admitting a flood of radiance to illumine the sombre shadows on the side opposite. Near the entrance door

stands the anatomical table on which Acquapendente has still before him the fresh, open vein-trunks for the demonstration of their valves, and just beside the preparation lies his famous book, "De Ostiolis Venarum." Young Harvey, already a four years' student with Acquapendente in Padua, stands close to Galileo at the table, both of them facing the full light of the entrance door, Harvey aglow with curiosity, his left hand resting on the table, while with the forefinger of his right he indicates the valves that rivet both eye and mind, and recognises their heartward direction as discovered by his master. Galileo, before presenting to the Venetian Republic the telescope with which he made out the satellites of Jupiter, is handing it to his beloved Acquapendente, at the same time showing him an instrument case he has just put down on the table, containing his geometrical compass, square, and balance. With a genial confidence of look he seems to say to the anatomist—Henceforth these will be the weapons of the natural philosopher; by these will truly be known and demonstrated the things of creation as they are in themselves and in their relations, according to number, weight, and measure. Acquapendente, who dominates the centre of the picture, extends his right hand to take the telescope, and with his left on Galileo's shoulder he listens proudly to his fellow-worker, as if with the consciousness that he too, in his forty years' study and teaching of the science of the human body, has made new and pregnant discoveries on the gradual ascent from observation to experience. Among the shadows at the exit door to the left of the spectator, with his back to the illustrious triumvirate, retreats a long lean figure, with Aristotle's treatise, "De Cælo," under his arm, which he seems to hug as if in disdain of the instrument with which Galileo discovered the satellites of Jupiter. This is the rigid peripatetic, Cæsar Cremonini. Such a picture, according to Puccinotti, comprises and expresses the closing facts of mediæval science and the opening vista of the modern. Are there no contemporary Parrhasios and Zeuxis to compete for the honour of transferring it to canvas?

CARE OF THE SICK AND WOUNDED IN WAR.

THE *Illustrated Naval and Military Magazine* for December, 1884, contains two papers bearing on subjects of interest to our profession. The first is a translation, by Lieut.-Colonel Suther, of a paper on the "Principles of Sanitary Service in Mountain Warfare; by Michaelis, Principal Staff-Surgeon and Sanitary Officer of the 14th Corps at Innsbruck." The object of the paper is to bring to notice a modification of the Tyrolean Kraxe as being remarkably well adapted for the carriage of the sick and wounded in mountainous districts, where wheel or even mule carriage is impossible, and where, from the nature of the ground, a stretcher could not be used. The Tyrolese Kraxe, with its head-board and padded head-rest, has been in use for centuries for the carriage of heavy weights over the mountains, and a modification of this, of which four illustrations are given in the paper, has been successfully employed, and has been found to be well adapted for the special conditions of mountain warfare. The paper merits the study of the military authorities, and of those responsible for the care of the wounded. The second paper is entitled "Recollections of the Red Cross," by Major Burgess, late H.A.C., and gives an interesting account of the early days of the English branch of the Society. Major Burgess appears to have taken an active part in organising the arrangements in 1870 for the aid sent from England for the relief of the sick and wounded in the Franco-German war, and he tells his story in a very readable manner. But he appears disappointed with the course which the Society has since followed, describing it as "what once was, but is now only by name, the 'National' Aid Society." The present management of the Society does not satisfy Major Burgess, and the Charity Organisation Society also comes under his censure. Although we do not agree with all that is said about their shortcomings, we think the paper well worthy of perusal, recording as it does the commencement of one of the great philanthropic movements of the age, and giving full credit to those who laboured for it in the days of its early struggles and difficulties.

UNIVERSITY OF LONDON.

THE next meeting of Convocation is fixed for Tuesday next, the 6th inst., at 5 P.M. There are many questions of interest to medical graduates on the agenda paper. The most important are: that Convocation should again urge upon the Senate the desirability of holding the Preliminary Scientific Examination twice a year; that Convocation should meet three times, at least, in every year; that the Annual Committee consider and report as to whether there is a general feeling of dissatisfaction with the University on the part of the teaching bodies; and lastly, that a special committee of twenty-five members be appointed to consider the proposals lately published by the Association for Promoting the Establishment of a Teaching University for London, and to report thereon to Convocation at an early meeting. The graduates are evidently alive to the necessity of reconsidering the position of the University; but we fear that the Senate will hardly approach the question from the same standpoint. It is most important that medical graduates should not permit the present crisis to pass by without asserting their position and compelling their just demands on the executive.

THE FUNCTIONS OF THE THYROID.

THE lately awakened interest in the singular condition known as myxœdema, and especially the relation inferred between it and imperfection of the thyroid gland, following the results, observed by Kocher, of extirpation of that body, will have been further stimulated by the two lectures which the Professor Superintendent of the Brown Institution has lately given at the University of London. The method of determining the function of a gland by extirpating it and observing the effects of such removal is one which has often been practised, but is not always wholly satisfactory. Kocher's description of the "cachexia strumipriva" accords with the "myxœdema" of Dr. Ord, the "cretinoid state of adult women" of Sir W. Gull, and the results observed by Mr. Horsley in monkeys after extirpating the thyroid with perfect antiseptic precautions. Whereas such effects of thyroidectomy in man require a period of years for their evolution, in Mr. Horsley's monkeys the whole series of symptoms is passed through in a few weeks. Thus the operation is succeeded by nervous symptoms, commencing with tremors like those of paralysis agitans, followed by paresis and hebetude; a condition of oligæmia and leucocytosis; the appearance of mucin in the blood, subcutaneous tissues, and salivary glands, puffiness of the face and eyelids, and subnormal temperature, ending in a fatal issue within five or six weeks. In spite of this difference in the rapidity with which the loss of the thyroid takes effect in monkeys, the resemblance of the one set of results with that of the other is too close to be disregarded, and Mr. Horsley may be justified in his conclusion that the thyroid has a double function—partly glandular, excreting mucin; partly hæmatogenous. This may be true; and if it be so, an importance is given to mucin which is excreted in considerable quantity from epithelial surfaces which should raise it in estimation. That the retention of an excess of this material in the body should be injurious and fatal to the organism is a wholly new conception; but it is apparently based upon arguments as conclusive as many that

are employed to demonstrate the functions of other organs which are more intimately known to us than the thyroid. The Brown Professor may be congratulated on the manner in which he has initiated his term of office, and we may hope that he will signalise it by continuing to pursue inquiries which may throw light upon much that is yet obscure in physiology and pathology.

WHOLE-MEAL BREAD.

THE late exhibition of bread stuffs at Humphrey's Hall, Knightsbridge, although it was not so largely attended as was expected, has been the means of reviving attention to the subject of whole meal, so strongly advocated by the Bread Reform League and by its indefatigable honorary secretary, Miss Yates. If the chemists alone had to decide the question of the relative values of whole meal and ordinary white bread, the public would have to wait a long time before it could obtain a satisfactory reply; for on this point chemists differ more than doctors. If we interpret the opinion of the profession of medicine correctly there is a growing disposition in favour of the whole-meal bread, on practical rather than on theoretical and chemical grounds. The bread which contains all the constituents of the wheat, except the outer, insoluble, and irritating portion of the seed, seems, when the appetite for it has been obtained, to be more satisfying and digestible than the white and fashionable product which is found on most tables, of rich and poor alike. It is believed, too, that for children the whole meal is the best for sustaining growth and for building up the skeleton strongly and in perfect form. The supply of whole-meal bread is now much facilitated by the improvements that have been introduced in the decorticated or granulated flour, to which Lady John Manners has called public attention in her late paper on Wheat-meal Bread. In the decorticated whole meal the extreme outer coating of the wheat grain is, by a special process of abrading, to the perfection of which Dr. Morfit has rendered able service, cleverly removed. After the abrading process is completed the whole of the grain is reduced to a fine flour, in which there is retained all the substances that are nutritious and digestible. Considering the fact that the whole-meal bread when it is properly manufactured is easily assimilated, we are led to the conclusion that it must be more nutritious generally than other bread, in which starch predominates. But we do not wish to be dogmatic, and would prefer, before pronouncing a strong opinion, to hear what medical men from their unlimited field of observation have to say. It is for this reason we direct attention to a topic which must soon be very widely discussed amongst all sections of the community.

CREMATION IN AUSTRIA.

A BILL to legalise cremation has been introduced in the Austrian Parliament; and, as its provisions are only of a permissive character, there is good prospect of the project becoming law. Many other States are also meditating legislation on this subject, and it may therefore be advisable to see what are the principal features of this scheme. The Austrian Bill stipulates that cremation may only be practised when the authorities have given special permission, and when the deceased has expressed in writing or before witnesses the desire to be cremated. In the absence of any such declaration, the heirs, trustees, or administrators of the estate of the deceased may obtain special permission to cremate his body. In no case, however, will such authorisation be given if any doubt whatsoever exists as to the cause of death. Cremation must not take place earlier than forty-eight hours after death unless the authorities issue instructions to the contrary, or in cases of epidemic disease. Cremation must not in any way modify religious rites and ceremonies. The body may be burnt either with or without the coffin, if the sanitary authorities have no objection to the latter course. In this case, however, the coffin must be burnt subsequently. The ashes gathered and placed in urns shall be given to the relatives, or, in default, kept in rooms specially constructed for this purpose on the spot. On each urn the name of the deceased shall be inscribed; but the urns may be destroyed after a lapse of twenty years, and the ashes buried in the cemetery, unless they are claimed by the relatives.

FATAL WOUNDS OF THE HEART.

IT was with feelings of relief and satisfaction that the public and the profession learned of the respite granted by the Home Secretary to Elizabeth Gibbons, who had been convicted and sentenced to death for the alleged murder of her husband at Hayes, near Uxbridge. In our last issue we strenuously urged the propriety, nay, the necessity, of such a course, especially as the verdict of the jury seemed to have been founded mainly on facts deposed to and opinions given by the medical witnesses, facts which undoubtedly raised a presumption of murder, but which, on the other hand, did not warrant the correlative conclusion; for, as we pointed out, they were consistent with either of two other alternatives—viz., (1) several mortal wounds may be inflicted suicidally in rapid succession; and (2) no individual wound found on the body of Mr. Gibbons was so placed that it might not have been the result of accident or an attempt at self-destruction. The former proposition receives support from a remarkable case of suicide, the particulars of which have recently been published. An overworked student of University College, London, compassed his own death by shooting himself through the chest (the bullet traversing the wall of the left ventricle of the heart) and head. After the first shot "the young man walked several paces, and was steady enough to reload the pistol and take most accurate aim at the base of the brain, where the second ball was found on opening the skull." Death did not take place until twenty minutes after the heart was wounded. It must not be supposed, however, that such a sequence of events is likely to happen except in very rare instances. Dr. Kirkman, writing from Hastings, Dec. 25th, tells of a crow that continued its flight for 650 yards after being shot at, and then suddenly fell dead. At the post-mortem a No. 5 shot was discovered loose in the cavity of the left ventricle. Such a case is valuable as showing the uncertainty as to the time and mode of death from injuries to the heart, a question which has not met with due consideration at the hands of medical jurists. It is certain, as in the case of Dr. Kirkman's crow, life may cease from disturbance of the cardiac nervo-muscular dynamism, irrespective of hæmorrhage, or mechanical impediment to the movement of the auricles and ventricles from accumulation of blood in the pericardium. In the Woolwich tragedy now under investigation "the weapon entered the left breast and went in a slanting direction into the heart; the stab was half an inch in width, was a clean cut presenting the appearance of the weapon having been plunged into the girl's heart and instantly withdrawn, the blood around the wound coagulating and preventing bleeding." So runs the report of the post-mortem examination. To the latter deduction contained therein we must, with deference, demur, for it is difficult to tell with certainty clots formed during the act of dying from those of post-mortem date; and, again, it must not be forgotten that a narrow wound passing to the heart through strata of muscles and other tissues—the more so if it be oblique—is more likely to kill by bleeding into the pericardium than by external hæmorrhage. Where the

coronary arteries are wounded death quickly supervenes from the combined effects of shock, anæmia of the cardiac muscle, and pressure on the heart. When a medical man has to inquire into cases like those enumerated above, he should make a patient and complete observation of all the facts, and then explain them as well as may be by the rules of common sense, and by relevant scientific data. Unfortunately, medicine as a science is largely empirical. We cannot measure with mathematical exactness the causes and effects involved in the continuation of life; and therefore in proportion to the uncertainty of our knowledge should be the caution in our procedure. This precept is of paramount importance when the existence of a fellow creature is at stake.

ANTI-VACCINATION AND ITS CONSEQUENCES.

WHEN a man with the anti-vaccination craze has three of his unvaccinated children attacked with small-pox and loses them all, one cannot have any feeling so strong as that of pity—first for his ignorance, and then for the terrible price he has had to pay for it. To lose three children is bad enough, but to lose them for want of a simple operation which in the eye of the law is compulsory, and which according to experience would probably have saved them from both death and the disease, is a responsibility which must greatly aggravate bereavement. It is very like withholding bread from a starving child, or a life-buoy from a child struggling in the water. This is the sad case of a confectioner in Shoreditch, on one of whose three children, dead of small-pox, an inquest has been very properly held by Mr. Collier. Small-pox, we often point out, is the schoolmaster that will in the long run drive men to the beneficent operation of vaccination, and a coroner does great service who lets light into those homes where small-pox is allowed to have its own way. Mr. Charles Westwood will have to look far back in the history of his family or of the country for any accident from vaccination to be compared with the disaster that has accrued to his home from small-pox. Most men of fifty years' experience in medical practice will tell him that they have not known of a death from vaccination. It came out at the inquest that when the deadly plague overtook the unprotected children, Mr. Westwood sent, not for a medical man, but for a Mr. James Swindells, who advised hyssop, pennyroyal, marshmallow, and other herbs, and it was for this part of his conduct that he was blamed by the jury. Infatuated as it was, it was not so irrational as his neglect to have them vaccinated, for the most enlightened physician has nothing to compare with vaccination in opposing small-pox.

SEWAGE AS FOOD FOR FISHES.

SIR JOHN LAWES, whose distinguished services to agriculture and agricultural chemistry entitle his words to the most respectful hearing, suggests that it may, after all, be more profitable to throw the sewage into the sea than to apply it to land. The difficulties attendant on the latter system have so often been discussed in these columns that they need not be stated again. All the old hope of profit to be derived from sewage as a land manure has vanished, and the sanitarian has only now to consider how most cheaply to get rid of an ever present and dangerous nuisance. To the broad line of Sir John Lawes's argument no exception can be taken. Enormous quantities of fish are removed from the sea near our shores, and in them enormous quantities of phosphate of lime, potash, and nitrogen. Now, phosphate of lime exists in sea-water in very minute quantity, and yet it is as essential an article of food to fishes as to mammalia. If then, as Sir John Lawes contends, the sewage of large towns gives back to the sea enough, or more than enough, to compensate for the food material annually taken from it, it may well be that continued and even increased prosperity may accrue to the fisheries. Of course there would be no need to continue the present disgusting system of throwing the sewage in a raw state into a river used as the highway of nations. Even after defecation the sewage would still retain nearly all the nitrogen and much of the mineral constituents. In one respect, indeed, such a defecation would be a great advantage to the fishes, for it was proved in evidence before the late Royal Commission that the sewage throughout a large area of the Thames absorbs, practically, the whole of the dissolved oxygen on which the respiration of fishes depends. This evil would be diminished by defecation, but would only be cured entirely by a much greater dilution. The speculation is a very interesting and important one, but a great deal of further inquiry will be necessary before it can be adopted as a basis for action. We must know, for instance, from a consideration of oceanic currents whether the sewage thrown into the estuary of a river will remain near the shore, or be carried away to deep water. Even the sewage of London would be but a small contribution to the waters of the ocean.

SUCCESSFUL REMOVAL OF THE LOWER PORTION OF THE RECTUM FOR CANCER.

DR. NICCOLINO NIERI reports, in the *Gazzetta degli Ospitali* of Dec. 10th and 14th, the history of a case which illustrates in a marked degree the advantages of direct surgical intervention for the relief of cancer of the lower bowel. C. S——, aged sixty-one, born at Scorticata in Romagna, is of sound parentage and constitution, and the mother of eight healthy children. She first felt a sense of weight and occasional lancinating pain in the rectum last January. Defecation became frequent and painful, and blood was mingled with the evacuations. Cold hip baths and unctuous applications, prescribed in the belief that the affection was hæmorrhoidal, failed to give relief. The pain increased, and radiated into the loins and into the right and left hypochondria; the appetite lessened, digestion became impaired, defecation more difficult, and a yellowish sanious discharge issued continuously from the anus. Emaciation progressed; the increasing pain caused sleepless nights; the motions passed were thin; tympanites developed; and a tumour, due to accumulated fæcal matter, was felt in the left flank. By digital examination, Dr. Nieri ascertained the existence in the lower third of the rectum of a hard, irregularly shaped tumour, ulcerated in some parts, and almost completely surrounding the gut. Regarding it as of a cancerous nature, he advised extirpation, which was performed on the 23rd of August last, while the patient was in the lithotomy position and under the influence of bichloride of methylene. Two semicircular incisions were made, about an inch and a quarter from the margins of the anus, and extending to the rectum, which was dissected for some distance from below upwards; then with the right index finger the intestine was detached for a space of five inches and drawn down; some loops of thread passed through it, above the diseased portion, kept the gut immovable during the process of severance by the galvanic cautery. The edge of the gut was now carefully secured by sutures to the skin, a drainage-tube inserted, an antiseptic dressing applied, and the patient replaced in bed, still in a state of insensibility. The loss of blood was slight, and few vessels were tied during the operation, which lasted an hour and three-quarters. Severe symptoms of shock followed, with very rapid pulse, clammy and livid face, cold extremities, and occasional vomiting. These symptoms yielded, in about an hour, to two hypodermic injections of musk, warm frictions, hot bottles to the feet, and brandy by the mouth. Six hours after the operation

the temperature was 100° and the pulse 88. With the exception of some lumbar pain and sleeplessness, the patient passed a fairly tranquil night. Next morning the urine was drawn off by a catheter and the dressing changed; the temperature was 100·4° and the pulse 101. The bowels acted the same evening without any trouble. On Aug. 25th the temperature was 99° and the pulse 116. On changing the dressing a little pus was seen at the end of the drainage-tube. Irrigation with 3 per cent. carbolised water was repeated three times daily during the next fortnight, the temperature remaining all the time about normal, and the pulse ranging between 110 and 116. At the end of three weeks from the operation the patient might be considered as cured, the wound being healed, the urine and fæces voided naturally, and no febrile symptoms present. But a sharp attack of bronchitis, due to imprudent exposure, prevented the patient's return home until Oct. 10th, seven weeks after the operation. On examining the fundament just previously, the rectum was seen drawn up and much contracted, apparently realising Chassaignac's description of "sphincterisation," or formation of a new sphincter, which he observed after removal of cancer of the rectum with the écraseur (*écrasement linéaire*). On microscopic examination of Dr. Nieri's specimen, it exhibited the appearances of malignancy. The operator has added to the interest of his narrative by recalling a few facts connected with operations for the removal of cancer of the rectum. It was first practised, and that successfully, by Faget on June 30th, 1763. Lisfranc revived the procedure in 1826. His first three cases were successful; but of his subsequent six cases only two recovered perfectly, in one the result was uncertain, and three succumbed in periods varying from twenty-four hours to twenty-five days after the operation. Velpeau, in six similar operations, had three recoveries and three deaths; while Rizzoli is reported to have performed the operation four times, with uniformly good result. Nélaton had several deaths after it; but Czerny is credited with only one death in twenty-five operations (nine without recurrence) during the last seven years (Bellage in *Centralblatt für Chirurgie*, No. 20). Cancer of the rectum has an historical medical interest, as under it succumbed Broussais, in spite of the assiduous attentions of his illustrious contemporary, Amussat. Studying Dr. Nieri's case by the light of the discussion on malignant disease of the rectum at, and since, the Copenhagen Congress, and of the abundant information given in the fourteenth chapter of Mr. Harrison Cripps's recent monograph on Diseases of the Rectum and Anus, it is reasonable to hope for fresh surgical conquests, in well-selected cases, over one of the most terrible, and usually deemed incurable, maladies.

CONVALESCENT DINNERS.

"PENNY Dinners," "Invalid Kitchens," and "Charitable Dinners for Convalescents," represent schemes which differ more or less widely from one another in their immediate aims, but which teach us, nevertheless, very much the same truth, that plain food as it is now prepared and sold is a somewhat too expensive luxury for many who greatly need it, the labouring poor. An evil so evident compels attention. It must be met in some way, but how? Much criticism, as just as hard, has been directed from time to time against the prevailing and apparently unalterable extortion which constantly maintains the high prices of bread and meat. It is quite clear that the cost of these bare necessaries of life should be cheapened if the poor man and his family are to hold their ground amongst us. Charity directed towards this end, while it avoids the granting of free meals to the idle or able-bodied malingerer, cannot tend to pauperise those who can work and can find work by removing the stimulus to exertion. Payment of some sort accordingly should form a principle, to be applied wherever possible, in the conduct of each of the systems of relief to which we have referred. The now famous "penny dinner" has proved that such payment may be very small indeed, and yet suffice for wholesome fare if the latter be suitably chosen. The Charitable Dinners Society represents a system allied to that advocated by Lord Brabazon, and appeals to a class hardly less needy than the school children. For two years it has been assiduous in providing, by means of coffee-taverns and eating-houses, substantial and inexpensive meals for deserving poor people convalescent from illness. Convalescence alone, it should be observed, and not penury apart from disease, is the object of its care. We are told, moreover, that a daily dinner for one fortnight is the measure of relief which it commonly extends to each individual. This term will probably suffice in most cases to enable a convalescent invalid at least to undertake some part of his usual occupation. The funds of the Society, though frugally administered, have of late fallen considerably under pressure of the demand to which the laxity of trade and the state of the labour market have subjected them. An appeal for subscriptions, which we hope may be suitably acknowledged by the charitable, has consequently been issued by the hon. treasurer, Lord Chelmsford. Contributions may be sent to his residence, 5, Knaresborough-place, S.W., or to the South Kensington Branch of the London and County Banking Company. While fully acknowledging the need of having a working fund in hand for the outlying and inevitable expenses of such a Society, we hope, in the interests of a very deserving movement, that everything will be done, by imposing a light tariff on the recipients of its charity, by selection of cases treated, and by the use of the cheap and wholesome diet common in rural districts, to render it, like that in aid of school children, as far as possible self-supporting.

CHRISTMAS AT THE HOSPITALS.

THE return of Yuletide brings with it the customary excitement at the hospitals. Entertainments, presents, and good cheer, all qualified as of Christmas sort, serve to lighten the somewhat weary round of hospital work. All the hospitals have been tastefully decorated, and most have given entertainments either of a public or private kind. At University College Hospital on Monday last the friends of the institution were invited by the resident medical and nursing staff to inspect the well-decorated wards and to assist at the entertainment provided for the patients and their friends. The central table in each ward was furnished with some pretty scenes representing such stories as "John Gilpin," or illustrating life in other climes, as Russia in Winter, with skating and sledging. A grand magic-lantern exhibition, styled "Christy's Old Organ," was given by Mr. Ash. The Strolling Players held a capital concert of vocal and instrumental music. Here, as at many other hospitals, the custom prevails of making each patient a suitable and useful present. At the London Hospital the two wings of the Grocers' Company's wards, opened about five years ago by the Queen, were brilliantly illuminated on Tuesday afternoon on the occasion of the annual treat to the children in these wards of the institution. Thanks to the efforts of the sisters who conduct the nursing arrangements, aided by the money and other contributions of friends of the institution, there were two enormous Christmas trees liberally bedecked with dolls and toys of every description. A vast quantity of toys was needed to supply the large number of child patients, for the beds for children in this hospital represent the largest number set aside for that purpose in any similar institution

The sight was a pleasing one to the large company assembled, and most of the children were highly delighted with the toys and cakes. For the last eighteen years it has been the custom of the managers of the Brompton Consumption Hospital to encourage the organisation of weekly entertainments for the amusement of the patients, from the beginning of November to the middle of April. On Tuesday night there was a distribution of gifts to the inmates from two enormous Christmas trees, erected in the concert room of the new building, which were laden with presents by the Misses Heddy, of South Kensington, and other ladies. On Wednesday evening the supporters of the Hospital for Sick Children, Great Ormond-street, were invited to a Christmas tree entertainment by the Lady-Superintendent, Miss Wood. A great Christmas tree, reaching from floor to ceiling of the lofty Victoria Ward, was provided by Miss Hope, one of the sisters, and was filled with a variety of pretty and useful articles. Carols and glees were sung by the nurses. We regret to say that the funds of this excellent institution, the very first of its kind, are not in a satisfactory state.

EXFOLIATION OF THE COCHLEA WITHOUT CAUSING DEAFNESS.

OUR Vienna correspondent writes:—The loss of the cochlea, according to the ingenious researches of Helmholtz, is considered to be equivalent to the loss of hearing power. A case, however, which Professor Grüber demonstrated on Dec. 12th, at the meeting of the Society of Physicians in Vienna, would seem to go far towards refuting this view. The case occurred in a lad, aged fourteen, who had been ailing for four years, and who was admitted into Professor Grüber's wards last November. It was stated that the patient suffered from an old otorrhœa with polypus of the left ear. As the patient experienced great pain, and as paralysis of the left nervus facialis existed, Professor Grüber had no hesitation in entirely removing the polypus, and in doing so came upon the cochlea in a state of necrosis. Since the operation the patient has felt better, his pains have ceased, and the paralysis of the nervus facialis has nearly disappeared; but, strange to say, the lad's affected ear has regained its power not only of recognising sounds, but of distinguishing musical notes. Only two similar cases would seem to have been recorded. One was observed by Dr. Cassels at Glasgow, the other by Dr. Christinneck in the clinic of Prof. Schwarze at Halle. Prof. Grüber did not enlarge on the features of this interesting case; but it certainly affords food for suggestive thought in reference to treatment of diseases of the ear. Heretofore, the labyrinth was considered a sort of *noli me tangere;* but now we see that the entire cochlea may be missing, and yet the aural powers be retained. On the other hand, it is not yet quite certain whether in the above case paralysis of the auditory nerve may not eventually occur.

RESPONSIBILITY IN SANITARY MATTERS.

DR. SIEVEKING presided at the last of the lectures which the Sanitary Assurance Association gave at the Parkes Museum in December, 1884. The lecturer was Mr. Mark H. Judge, who delivered an address on Public and Private Responsibility in Sanitary Matters. The question to be considered was whether any good could come out of attention to the conditions under which we live. Was it correct to believe that sanitary reformers, from Moses and Mahomed down to Edmund Parkes and Florence Nightingale, were in the right in attaching importance to the state of man's surroundings? It was to the physician that we must turn in order to set these questions at rest; from him must the architect learn how to build residences fit to live in. De Chaumont and Erichsen were quoted to show that sound sanitary conditions were essential for the maintenance of health, if not for the very existence of life itself. Some of the chief sanitary defects in houses were pointed out. It was urged that the sanitary engineer, and not the sanitary architect, should be concerned in the construction and ventilation of the main sewer. Mr. Judge criticised the powers conferred on local boards and surveyors in saying that their qualifications did not fit them for regulating the sanitary arrangements of residences. The responsibility of the householder should be increased. Fresh legislation was required on these matters.

THE EXAMINATION OF SURGEONS-MAJOR.

WE are sorry that our contemporary, the *Army and Navy Gazette*, does not approve of our views on the subject of the examination of surgeons-major in the army prior to selection for promotion, but we see no reason to change the opinions which we have throughout consistently advocated. The subject is one of great importance to the army. Promotion by seniority had a long trial in the medical department, and was found wanting. It was condemned by the Royal Commission appointed to inquire into the organisation of the department after the Crimean war, and subsequently by Lord Cranbrook's Committee. By the Royal Warrant of 1879, based on the report of that committee, all promotions above the rank of surgeon-major are to be made by selection for "merit and ability," and the grounds of the selection are to be stated in writing. This clearly bars all claim to promotion to the higher grades on the ground of mere seniority, and devolves upon the head of the department a serious responsibility. It manifestly involves the principle of the selection of the fittest, and not merely the exclusion of the incompetent. But to enable the Director-General to carry out this principle it appears to be necessary that he should have the means of testing the qualifications of the officers from among whom the choice is to be made. And we know of no method in which this may be effected so likely to answer the purpose as the examinations which have been authorised. It is true that the confidential reports furnish a certain amount of information as to the general fitness of an officer for promotion, but they are deficient on points of great importance. The system of promotion by selection, if honestly carried out, cannot fail to exert a very beneficial influence upon the medical officers by holding out an inducement to them to keep themselves well up in professional knowledge, especially in its bearing upon military sanitation. It will, in fact, supply that stimulus which in civil life is brought into operation by professional competition, and the want of which has hitherto been most injurious to the army. In the Indian service this has been less felt, as the numerous civil appointments have brought out the varied qualities of the medical officers and have been looked to as a reward for good work, but under the blighting system of seniority in the Army Medical Service there has been no such inducement to intellectual culture or professional study. We sincerely trust the system of promotion by selection, impartially administered, may be followed by the result which we anticipate, of obtaining for the army an efficient, zealous, and thorough administrative medical staff.

"SCENT."

AN attempt is being made to account for the remarkable powers exhibited by some dogs on the presumption that "scent" is a faculty *per se* altogether distinct and different from the sense of smell. This is, as all physiologists must know, a misconception. The truth is that each species of animal has some specially developed faculty of relation by which it is, more than by other faculties, placed *en rapport* with the external world. The differences are

great even among small classes of beings; for example, among dogs some use sight more than smell—as the grey-hound. The sense of smell is, however, generally developed to a high pitch among those animals which have in a state of nature to hunt for their prey, or to avoid predatory enemies. There is nothing, that we can perceive, difficult to understand in the intelligence exhibited by the lower animals. The scientific doctrine of evolutionary development affords a satisfactory solution of every problem, and renders the facts plain to see.

OVER-PRESSURE IN SCHOOLS.

A SUB-COMMITTEE on "Over-pressure," appointed by the Conference of Representative Managers of London Board Schools, has arrived at the conclusion that while the effects of over-pressure are not wide-spread, they exist, and that measures of relief are needed. It is recommended that home lessons should be minimised, and altogether prohibited in the case of children below the third standard; that "keeping in" should never be resorted to except for punishment; that inspectors should be less examiners than inspectors; and that other changes in administration should be employed to reduce the evil which, in a limited degree at least, is admitted to prevail. We do not anticipate any great result from these "recommendations," even if they be adopted. What is needed is a total and immediate abandonment of the forcing system and complete discontinuance of the wholly indefensible practice of giving children lessons to learn at home. Children ought never to be worried with lessons out of school hours. While the active business of education is in progress in school, a child may be taught all that it is necessary or proper to teach it. The supposed need of lessons "out of school hours" is a product of the ignorance which prevails as to the physiology of mental processes, and especially of that reception and retention of ideas which we call *memory*. School managers and teachers need themselves to be put to school to learn the rudiments of science in connexion with these matters, and not until they have been thus instructed will they be fit or trustworthy as regards the education of the young.

THE GENESIS OF THE HUMAN MIND.

MR. ROMANES in two recent lectures delivered at the London Institution has placed the facts and primary inferences which form the bases and data of discussion on this subject in a particularly clear light. The force of his logical argument has, of course, carried him to the conclusion that the mind, like the body, of man, has been produced by the same process that has been adopted in the development of the animals below man—namely, *evolution*. No other issue was possible to an honest scientific inquiry. The difference between man and the brutes below him in the scale of mental power and faculty is one of degree, not of nature or even of area. Mr. Romanes laid great stress on the objection that man alone has been endowed with the *logos*—that is, the gift of speech or language; but, as he afterwards showed, this position is really untenable, because history and observation combine to prove that while, on the one hand, the evolution of intellect proceeds *pari passu* with the acquisition of the power of the tongue in *man* as a genus and as an individual, on the other hand, reason and "instinct" are increasingly apparent in the brutes in proportion as they develop the faculty of expression or communication among themselves and with man. We know how horses and dogs "speak" in a language of their own, communicating their desires to each other and to man; and evidence is not wanting that the conceptions they form are more than simple or immediate. They not only observe, but reason. They adapt means to ends, forming purposes and carrying them out. They make estimates of character, and not unfrequently go far beyond these lesser performances, exhibiting sympathy, regard, protective care, and even exercising ingenuity in effecting their purposes. The *logos* is as much a matter of development as anything else. It is not a gift, but an acquisition, and may be lost, as we see it lost now and again, in the case of any individual who is deprived of the educational advantages of association with those who have acquired the power of cultured speech, and are able to communicate it.

YELLOW FEVER ON BOARD A NEWCASTLE STEAMER.

OUR Newcastle correspondent, in reference to the arrival in the Tyne last week of a steamer whose crew had suffered most severely from yellow fever contracted on the West Coast of Africa, states that, in addition to the six men mentioned as having died at sea, another seaman landed at Dartmouth has also died, as well as one sent on to Liverpool, who has since succumbed from the effects of yellow fever. The *Iolanthe* carried seventeen hands, and the only members of the original crew on arrival in the Tyne were the mate and a boy. The original captain and the survivors of the original crew left the vessel at Havre, at which port she had called. Every precaution has been taken as to the disinfection of the ship and the clothes of the deceased seamen by the Tyne port sanitary officers.

THE MARY WARDELL CONVALESCENT HOME.

A VERY touching appeal is made by Miss Mary Wardell on behalf of her convalescent home for scarlet fever at Brockley-hill in the *Daily News* of Dec. 31st. She writes: "Ever since the day of its opening by the Princess of Wales, on July 14th, the flow of contributions which I was able by my personal efforts to raise has ceased. ..... Whilst doing the work of a matron, and so saving the salary of that official, I have often been obliged to undertake the work of a household servant, for which I am physically unfit, and at the same time I have endeavoured to fulfil the almost impossible task of combining a secretary's duties with these other occupations. All this I would willingly and cheerfully do had I at the same time encouragement and support from others; but the result of all my sacrifice of time, strength, and such means as I can rightly dispose of without injustice to others, is that I must borrow money to meet the expenses of the few months during which I have been receiving patients, and must shortly close the home with a heart-broken sense of failure and wasted life and energies." We are sincerely sorry to hear that there is any danger of the good work which Miss Wardell is doing coming to an end for want of support. Charitable hearts and means to do good happily abound in our midst, and we are sure there are many who will hasten to make the glad new year still more glad by assisting Miss Wardell to obtain the £5000 for which she so eloquently and so pathetically pleads.

THE PRICE OF COCAINE.

WE are glad to hear that there has been a considerable reduction in the price of the new anæsthetic, several well-known firms offering to supply the hydrochlorate of cocaine in small quantities, and for a limited period, at eighteenpence a grain. The supply is still far from abundant, and it is not improbable that in a week or two it will regain its original price. In the United States it at first commanded a dollar a grain. Messrs. E. Merck & Co., of Darmstadt and London, have, with great liberality, placed a considerable quantity of the alkaloid in the hands of one or two well-known observers in order that its properties may be thoroughly investigated.

A HOSPITAL TRAIN.

THE Italian War Office in concert with the Society of the Red Cross and the Upper Italy Railway Company has succeeded in putting up on wheels a hospital train which must prove of the highest utility, not only in belligerent operations, but also during the invasion of an epidemic. The train in question concluded on Saturday last a trial trip, or more truly a triumphal progress, at the Roman terminus, after having journeyed through Piedmont, Liguria, Lombardy, Venetia, Emilia, Tuscany, Umbria, and the Neapolitan territory, in all of which provinces it was visited by the leading authorities in medicine and engineering, and subjected to criticisms which must conduce to the perfecting of its appointments. The Upper Italy and Venetian Railway companies having provided a number of carriages on the Swiss, or rather the American, model—that is, with a corridor passing down the length of the carriage, and in continuous communication with the similar corridors of the other carriages of the train, the Red Cross Society undertook in conjunction with the Army Medical Department to furnish the material necessary to convert such a train into a thoroughly appointed clinical ward. This has been effected by ranging beds on each side of the corridor, the beds being slung in hammock fashion so as to reduce to a minimum the vibration or the shock inseparable from the sitting compartments in present use, the beds themselves consisting of palliasses laid on frames of highly elastic metal network, suspended on supports of wood and leather. The heating of the carriages as well as their ventilation have also been skilfully secured, and a trained staff of attendants effect the speediest possible removal of the discharges of the patients, and the subsequent disinfection and deodorising. Special carriages are reserved and appointed for the hospital stores, the compounding of medicines, and the *armamentarium medico-chirurgicum*, while others on the Pullman system are attached to the train for the accommodation of its professional *personnel*. Experience will suggest improvements on this first specimen of a most necessary adjunct to the resources of army and State medicine; but even as now appointed the hospital train recently on view at the great seats of medical and engineering science throughout Italy reflects the highest credit on its promotors and constructors. Had such a means of transport been lately in working at the various scenes of choleraic infection in the Peninsula, how swiftly the removal and isolation of the sick could have been effected, and how successfully the disease, inducing panics, might have been foreclosed.

DEATH CERTIFICATES IN CASES OF INJURY.

A REPORT of an inquest lately held at the Southwark coroner's court appeared in the *Evening Standard* of Dec. 19th. It was there stated that Mr. Philip P. Jackson, M.R.C.S., had been severely censured for having given a certificate of death from natural causes, "he knowing the whole facts of the case," and amongst them that the deceased woman, Carney, had been subjected, as was alleged, to intentional violence at the hands of her son-in-law. Had this been correct, without doubt he would have merited the condemnation he received; but Mr. Jackson meets the accusation by saying that he only saw the deceased a few hours prior to her death, and further, that he did not consider the bruising on the face as having conduced to or accelerated death. Unwisely, as we think, he was not called at the inquest, where statements derogatory to his professional character were made without his having the opportunity of denying their truth. The verdict of the jury, however, was in accordance with the certificate, "the post-mortem proving nothing whatever to the contrary." Whilst of opinion that Mr. Jackson acted with perfect *bona fides*, and erred only by way of omission, we cannot help feeling that he would have acted more circumspectly had he informed the coroner of his own view of the case, and of the rumour that deceased had been roughly handled. From his own showing the patient was too ill to undergo a satisfactory examination, and it therefore became the more necessary to free himself from all responsibility in the matter. Had the post-mortem examination revealed serious injury to the brain, it could scarcely be contended that the case was not essentially one for inquiry, or that death was not accelerated by the injury.

INFECTIOUS AND CONTAGIOUS DISEASES IN SCHOOLS.

AT the meeting of the Medical Officers of Schools Association, to be held at the Medical Society's Rooms on the 7th instant, a code of rules for the prevention of infectious and contagious diseases in schools will be brought forward for approval by the Association. The Code is divided into five sections, as follows:—Section 1. General hygiene, comprising drainage, water and milk supply, the duties and undivided responsibility of a medical officer, &c. Section 2. The infirmary, its construction, arrangement, and management. Section 3 deals with the medical examination of scholars on admission, &c. Section 4 points out the general precautions to be adopted against the introduction and spread of disease; and Section 5 the measures to be adopted when an infectious disease has appeared in a school. Two appendices follow, one containing forms of certificates suggested for use with reference to the prevention of infectious disease in schools, and the other giving a list of disinfectants, with rules for their use The rules are practical and plain, and it is to be hoped that the result of this labour on the part of the Association may prove not less useful to parents and guardians, who deal with the home life of the children, than to school authorities, since without the sympathy and intelligent co-operation of the former no real progress can be made in this great department of preventive medicine.

TROPHONEUROSIS (?) OF THE TESTICLE.

A CASE which may possibly be an example of a trophoneurosis is recorded by M. Lemmonier in the *France Médicale* of December 25th. The patient was a young man aged nineteen, who sustained severe injury to the skull after a fall from a height of about six feet. Hemiplegia of the right side, and rapid atrophy of the testicle and of the right upper limb are the chief phenomena recorded. There was considerable disturbance of consciousness, but ultimately the patient appears to have recovered to a large extent. The hemiplegia was probably dependent upon compression by blood poured out as the result of the fracture of the base of the skull. No other conditions seem to have been present to account for the rapid wasting of the arm or testicle. Nélaton and others have spoken of the possibility of atrophy of the testicle resulting from causes acting at a distance.

A TROUBLESOME PATIENT.

ABOUT a fortnight ago a young man, well-dressed and in apparently good health, applied for advice at the Middlesex Hospital. He was seen by the resident medical officer, to whom he complained of pain in the perineum, which he attributed to a long-standing gleet. He was then referred to the house-surgeon, who carefully examined him, but failed to find anything the matter with him, and he was accordingly given an order to see the assistant-surgeon on his next day of attendance and told to leave the hospital. This, however, he refused to do, and expressed his intention of remaining. After sitting in the waiting-room for two

hours he was again requested to leave, and it was explained to him that he could not be taken into the hospital for such a trivial ailment, and that the assistant-surgeon would see him. He then lay down across the door and behaved in a foolish manner so that the hospital porter was told to remove him. This he did, when the man turned round and knocked the porter down, stating that he only desired to be arrested. He was then given in charge, and the magistrate remanded him for a week in order that his case might be examined more fully in the infirmary, and he has since been discharged.

THE PAY PRINCIPLE IN THE NORWICH HOSPITAL.

AT this hospital the proposed rule providing for the admission of pay patients has, after a good deal of discussion, been rejected. The Rule was as follows:—

"A limited number of patients above the ordinary class of hospital inmates may be received. Such cases must be specially in need of hospital treatment, and shall bring an introduction from a medical man. Patients of this class shall pay at the rate of £1 1s. per week, or such other amount as the Board of Management shall determine."

We are glad that this rule has been thrown out. Not because we deny that there are many people in need of hospital accommodation who can afford to pay, but because there seems to us a grave tendency to turn the poor out of our hospitals and to make increasing accommodation for those who can pay. This tendency needs resistance as far as the existing hospitals are concerned, which are not too much, but all too little, for the accommodation of those who cannot pay. The great development of the teaching of nursing makes it easy to establish in every great town houses for the accommodation of those who can afford payment.

EMOTIONAL JAUNDICE.

THE possibility of the dependence of jaundice on emotional disturbances in some cases is unquestionably great. The case quoted by Murchison of the soldier who became rapidly jaundiced as the result of being restrained from wreaking his vengeance on a certain individual is probably familiar to most of us. M. Rendu has recorded the circumstances under which a young woman aged twenty-five, convalescent from puerperal peritonitis, became jaundiced within three hours after an unsuccessful attempt to catheterise the bladder. The yellow colour of the skin remained four days, and the urine contained bile pigment one day longer. The sudden onset and rapid disappearance of the jaundice are in favour of its being of neurotic origin, but the presence of subsiding puerperal peritonitis rather vitiates the evidence for the case as one of emotional jaundice.

OPEN SPACES IN LONDON.

THE Metropolitan Public Garden, Boulevard, and Playground Association, in its report for the year which has just closed, affords good reason to hope that its vigorous work of reform will long survive that exhausted term. During the two years of its existence it has added many open spaces to those hitherto devoted to recreation within the metropolis. The areas thus gained have been for the most part the sites of disused burial-grounds. These and the other vacant spaces have been laid out as gardens and playgrounds, and furnished with appropriate gymnastic apparatus. There is still, however, much to do. Numerous graveyards unused for burial, for building, or for any purpose, public or private, save to guard the remains long since committed to them, invite the offices of the Association to remodel them in the interest of the surrounding districts. It would seem that the natural destiny of all enclosed land within the urban area, irrespective of its history, is to be built upon. The hygienic reasons which have weighed with us in condemning this practice have been reiterated in former articles. We therefore the more frankly and earnestly commend the wise action of the association, and we doubt not that the public and the ecclesiastical proprietors will see reason to forward its salutary work.

PROMPT SUPPLY OF SURGICAL APPARATUS FOR THE POOR.

THE absurd rules of the otherwise excellent Societies which exist for supplying the poor with surgical apparatus have led other charitable bodies into the same line of work. The council of the Hospital Sunday Fund devotes 1 per cent. of its collection to this purpose, which for the current year will amount to £1400. Now the Charity Organisation Society have established a department for the prompt and economical supply of these instruments on the same plan as the Convalescent Department. It is to be regretted that the Surgical Aid Societies should give too good reason for this competition of other bodies, which have quite enough special work of their own to do. Provided fit cases are selected, it must be allowed that the supply of surgical instruments is a most urgent and commendable form of charity.

STREET ILLNESS AND BAD POLICE AND WORKHOUSE REGULATIONS.

NEITHER the police authorities nor the authorities of the Kensington Workhouse appear to advantage in the account of the inquest on Robert Thomas Roylance Wigington, aged sixty-four, which was reported in *The Times*:—

"Early on the morning of December 22nd he was found insensible outside the booking-office at Earl's-court Station. He was taken in a cab to the infirmary of the Kensington Workhouse, where he was refused admission. He was then taken to the police-station, when he was found to be dead. Police-constable Dixon deposed to seeing the deceased taken to the infirmary. The authorities there refused to admit him. The Coroner: Why did you not call a doctor at first? Witness: Because he was in a cab and not in the road. If he had been in the road I should have called a doctor. The Coroner: A nice distinction when life or death is concerned."

There is some confusion here. But whether Mr. Wigington was found in the road or in a cab is a matter of unimportance, compared with the folly of police and workhouse rules, which hinder the nearest assistance being cheerfully and promptly offered to a dying man. Can anything be more absurd than for a workhouse infirmary, supported by public rates, to refuse admission to a dying man, or for a policeman to go wandering about London with such a man before consulting the nearest doctor?

A NEW OTOSCOPE.

A NEW otoscope, arranged by M. Rattel, was exhibited at the Académie de Médecine last month. It is lighted by means of an incandescent wire made of manufactured charcoal, which gives an illumination equal to two candles. An accumulator giving a current of electricity of a certain intensity may feed the lamp for at least six hours. The reflector is represented by a portion of an ellipse constructed in such a manner that one of the foci corresponds to the site of the lamp and the second to the extremity of the instrument, which has pretty much the form of an ordinary funnel-shaped otoscope. The light can be extinguished or graduated to any degree. The opening through which the observer looks is large enough to permit the passage of all the ordinary aural instruments.

COLLECTIVE INVESTIGATION IN GERMANY.

THE results of the inquiry into phthisis set on foot by the Collective Investigation Committee of the Verein für innere Medicin (Berlin) will be published in the *Zeitschrift für Klinische Medicin*. Dr. Meyerhoff will report upon the question of contagiousness, Dr. Oldendorff on that of heredity, Drs. Leyden and Fräntzel on curability, and Dr. Kalischer on the passage of pneumonia into phthisis. The scheme of this inquiry was, it may be remembered, far more complete and exhaustive than the corresponding one undertaken in this country, and it will be interesting to learn its conclusions. The next subject proposed for investigation by the committee is the communicability of contagious diseases of children through a third person (or thing). The diseases named are: scarlet fever, measles, whooping-cough, variola, varioloid, diphtheria, and mumps.

THE DARENTH SMALL-POX CAMP.

COMPLAINTS as to the administration of the Darenth small-pox encampment continue to be made, notwithstanding the statements of Sir E. Currie that they are unfounded. These complaints relate in the main to irregularity in the supply of meals, dirty beds, and absence of proper clothing. The Asylums Board managers have certainly spared no expense in their efforts to provide everything needful for the sick, and in their own interests it would be well that a committee of investigation should be appointed. More than one complaint has been made to the effect that patients have died without any proper record of the death being kept, and relatives have in consequence suffered considerable distress of mind. If the local administration is defective it should be forthwith modified, and the first step will be to find out where the fault really lies.

HOSPITAL SUNDAY.

THE annual meeting of the constituents of the Hospital Sunday Fund, on the 23rd ult., passed off most satisfactorily, the Lord Mayor presiding. His speech was in good taste, and showed kindly sympathy with the objects of the fund. Several vacancies in the council were filled up. The entire absence of opposition or even criticism at the meeting should not be construed by the council as meaning that there is no more for them to do in the way of extending this great movement, but, on the contrary, as an encouragement to devise yet further means for developing it.

THE UXBRIDGE TRAGEDY.

ON the afternoon of the 30th ult. the governor of Her Majesty's prison of Newgate, Captain Sutton Kirkpatrick, received an intimation from the Home Office that the sentence of death passed upon Elizabeth Gibbons for the murder of her husband at Hayes, near Uxbridge, at the last sessions of the Central Criminal Court, had been respited. It is understood that those who have prepared the petition to the Home Secretary on behalf of the condemned woman will not relax their efforts to obtain an investigation into the circumstances of the case by the law advisers to the Crown, with the view of determining whether there has not been a wrongful conviction.

THE LONDON FEVER HOSPITAL.

WE most gladly repeat our commendation of this institution as one worthy to be held in remembrance. It is very meritorious and very impecunious. In the last thirty-eight years it has admitted 48,348 cases—and what cases! and at what relief and advantage to private families!

THE following very serious statement is made in the *Western Morning News* regarding the excessive punishment of boys on board Her Majesty's ship *Northumberland*, whose crew includes 140 boys. "During the late cruise, and also since her arrival home, the amount of corporal punishment inflicted is truly horrifying. Almost every morning batches of the boys, from half a dozen to eighteen in number, have been caned or birched, chiefly the former, with great severity, the sufferers often being removed in various stages of insensibility. The ship's corporal has been repeatedly enjoined to greater vigour by the officer superintending these floggings, and the bruised and bleeding backs of the boys, and their writhings and howls, have testified to the vigour of his arm. The frequency and severity of these punishments have become a matter of loud protest among the able-bodied blue-jackets, who are themselves protected by law from similar tortures. The offences for which these almost daily whippings have been inflicted are said to be of a trivial character." This, if true, discloses a very dreadful state of affairs. The matter demands immediate investigation by the authorities.

FROM the report of the examination made by Colonel Sir Francis Bolton, C.E., of the water supplied by the several metropolitan water companies during the month of November, it appears that the water sent out by the companies drawing their supply from the Thames again exhibited an unusually small proportion of organic matter for this season of the year, as did also the water derived from the Lea. All the waters were delivered in a clear and bright condition.

MESSRS. WOOD AND CO., the publishers of Lafayette-place, New York, our agents for the United States and Canada, have received an order from the Medical Purveyor of the American Government to supply the Medical Department of the United States Army with THE LANCET, so that every regimental depôt, commencing with our present issue, will receive regularly a copy of the journal.

AT a meeting of the Oldham Sanitary Committee on the 18th ult., Dr. Hill, the medical officer of health, reported that the severe and sudden illness from which some twenty or thirty persons had suffered after attending a public tea recently held in the town was attributable to the ingestion at the entertainment of unsound cured tongues.

AT a public meeting in connexion with the University College (London) Medical Society, to be held on Jan. 14th next, Prof. Ray Lankester will deliver a lecture on Bacteria and Bocilli in their relation to Putrefaction and Disease. After the lecture there will be a demonstration of Micro-organisms and Methods of Cultivation.

DR. JAMES RUSSELL, F.R.C.P., J.P., Senior Physician to the General Hospital, Birmingham, has resigned that office, after twenty-six years' service on the honorary staff of the institution. Dr. Russell's friends will be glad to hear that his retirement from public work has been occasioned by the pressing calls of consulting practice.

A NUMBER of scientific men in Paris having founded a club called "La Science," for the purpose of dining together at stated times, recently entertained M. Chevreul. M. Pasteur has been nominated chairman of the next dinner. A similar club was instituted six years ago under the name of "Banquet de la Presse scientifique."

PROF. GUIDO BACCELLI has been elected President of the Roman Academy of Medicine.

THE vestry of St. Luke's are determined to oppose the proposal of the Governors of Dulwich College to hand over seventy-two acres of land to the Metropoitan Board of Works for the purpose of a people's park. A deputation which waited upon Mr. W. M. Torrens, M.P., pointed out that the land of Dulwich was devised by Alleyne for the joint benefit of the parishes of St. Luke, St. Botolph, Bishopsgate, St. Saviour, Southwark, and St. Giles, Camberwell; and therefore to give the land as stated would be a serious loss to the parishes named, more especially St. Luke's. The deputation further showed a plan whereby a recreation ground might be provided for St. Luke's from the price at which the Dulwich land was valued—namely, £21,000.

THERE appears to be urgent need of a mortuary in the parish of St. Botolph, Aldgate. A correspondent writing to a contemporary on Dec. 30th, complains that the body of a man "who hung himself on Sunday, still lies in the room, just as it was found, and this too in the largest common lodging-house in the London Docks," and adds, "the same complaint is always made at every inquest held in this parish."

IT will have been seen by an announcement in our advertising columns that the Commissioners in Lunacy have issued notices that in future they will, in all cases of violation of the laws respecting the detention of persons supposed to be insane, proceed by indictment against the offending parties.

DR. WILLIAM MARSHALL, who acted as medical attendant to the late Duke of Albany prior to his Royal Highness's marriage, died on the 22nd ult. at Crieff, Perthshire, in the fiftieth year of his age. The deceased retired from the service of Her Majesty several years ago, in consequence of failing health.

TO avoid as far as possible risk of infection in surgical procedures, Professor Esmarch is stated by the *St. Petersburger Med. Wochenschrift* to have discarded wooden operating tables and to employ only those made of metal. All the instruments used are nickel-plated and metal-handled.

THIS afternoon (Friday) the President and Vice-Presidents of the Royal College of Surgeons of England will receive a deputation from the Association of Members of the College respecting certain changes in the interest of the Members to be suggested in the new Charter.

IT is stated that the members of the Imperial Academy of St. Petersburg caution the public against the frequent repetition of experiments in "thought-reading," as a number of serious cases of illness are reported daily by the press.

THE death is announced of Dr. Grimm, Staff Surgeon and Body Physician of the German Emperor, and Chief Agent in the Organisation of the German Military Sanitary System.

WE understand that one of the members of the English Cholera Commission, Dr. Heneage Gibbes, has returned to London.

GIFTS TO HOSPITALS.—One hundred and twenty of the principal hospitals in town and country have, we understand, received, within the last few days, a donation of Messrs. Cassell and Company's periodicals for the use of the patients.

Pharmacology and Therapeutics.

THE "M'K. AND R." CAPSULED NITRO-GLYCERINE PILLS.

NITRO-GLYCERINE is such a valuable therapeutic agent that it is not surprising that new methods of administering this powerful remedy are constantly being introduced. The "M'K. and R." capsuled pills, from their small size and attractive appearance, are likely to meet with much favour. They have been tried in angina pectoris, asthma, neuralgia, and a number of other complaints in which the drug is recommended, and have been found most useful. The covering is perfectly soluble, dissolving in the mouth in about thirty seconds, and there can be no doubt as to the activity of the contents, for they produce as much headache as the most ardent pharmacologist could desire.

THE "MAORI" CIGARETTES.

We have received specimens of Dr. Douglas's "Maori" cigarettes for the relief of asthma, chronic bronchitis, and hay fever. They obviously contain nitre, and probably henbane and stramonium. They burn freely, and we are not surprised to hear that they have been found useful. It is said that they have been used with success in the wards of the Royal Infirmary at Edinburgh. They may be obtained from T. Keunedy Douglas, M.B., C.M., 2, South St. John's-place, Perth.

VALOID OF COCA.

The introduction of a new and reliable preparation of coca will be hailed with satisfaction. The valoid is made from the fresh leaves of the coca plant, each drachm representing that weight of the crude drug, including the whole of the alkaloidal and other principles. It has been extensively employed of late, and, curiously enough, is found to exert a double physiological action. In small doses it acts as a sedative promoting sleep, whilst in larger quantities, such as three or four drachms, it stimulates the nervous system and induces an increased capacity for mental exertion. It has been used with much success in sleeplessness arising from overwork or worry and anxiety, and also in the treatment of impotence, spermatorrhœa, and a number of allied diseases. It has no toxic action.

OIL OF PEPPERMINT.

Oil of peppermint would appear to be a useful application for burns, according to Dr. Brame. The part burned is first immersed in water, and then the oil is painted on by means of a fine camel-hair pencil. The chief effect is the immediate relief of the pain.

ANTIPYRIN.

Dr. Ernst of Zurich reports that he has observed in five cases the occurrence of a rash during the administration of the new antipyretic "antipyrin." The eruption, which occurred on the chest, stomach, and back, is described as consisting of small reddish irregularly circular spots, resembling pretty closely those of measles. The spots are confluent, and the patches formed, being separated by areas of sound skin, present the appearance of a rose marbling. When pressed the red colour disappears, leaving a brown pigmentation. The eruption increases in intensity of colour for about five days, and then the red gives way to a brown colour, and the rash finally disappears though the use of the antipyrin be continued.

TEUCRUM SCORDIUM.

Teucrum scordium, the water germander, is reported to have been used both locally and internally in the treatment of piles. Mr. Murjohn has prepared a liquid extract by exhausting the powdered herb with dilute alcohol, the preparation being of a blackish-green colour and given in doses of one or two fluid drachms. A soft dark green extract is obtained by evaporating this extract, which has been used in the form of pills, one grain being combined with two grains of the powdered herb. An ointment for local use is prepared by mixing one part of finely powdered herb with nine parts of vaseline.

VERBENA HASTATA.

The blue vervain has been found by Dr. Weber to be an excellent sudorific. The root, which has a bitter astringent

and nauseous taste, is the most active part of the plant, but the leaves and flowers may also be used. A fluid extract is made in the usual manner, the dose of which is one-half to one fluid drachm.

ERGOT.

Ergotinic acid, sphacelinic acid, and cornutine are the active principles of ergot according to Dr. R. Roberts. Ergotinic acid, even in large doses, did not produce very marked effects. Sphacelinic acid is a powerful poison, the amount obtained from thirty grammes of ergot being sufficient to kill a fowl, and that from 200 grammes to kill a small pig, death resulting from gangrene; this principle is probably the cause of the gangrene which sometimes attends the use of ryebread containing ergot. It causes a tetanic action in the uterus. Cornutine is the only energetic alkaloid that occurs in ergot. The ergotinine of Tanret has no physiological effect according to Dr. Roberts; but five milligrammes of cornutine causes salivation, vomiting, diarrhœa, and active movements of the uterus in warm-blooded animals, as well as contraction of the bloodvessels and a rise in the blood-pressure. The latter effects are also produced by sphacelinic acid. The only preparations which should be used are those containing these two principles.

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

[FIRST NOTICE.]

THIS report is issued as a separate volume forming the supplement to the Thirteenth Annual Report of the Board, and it deals with the medical transactions of the Board during the year 1883. Vaccination appears, notwithstanding the noisy agitation of a few, to be making fairly steady advance, the children certified to be vaccinated numbering about twenty times those who, so far as certificates are concerned, remain unvaccinated; and with reference to the prevention of small-pox, it is interesting to note that the mortality from that disease amongst the unvaccinated children and the vaccinated was about as 200 to 1. Calf lymph continues to be distributed to registered medical practitioners, the number of points and tubes sent out during the year being 9311 and 2151 respectively. Mr. Shirley Murphy, the Assistant Director of the Calf Lymph Establishment, reports on similar institutions in Holland and Belgium, and he is inclined to regard the results obtained in the former country as superior to those seen in London, the difference being in his opinion due to the better age and finer skins of the calves used in Holland. The animals sent to Lamb's Conduit-street are at times too young, and they have often hardly got over the hardships to which they have been exposed by long land and sea journey, and it must be our endeavour to overcome this and allied difficulties if the local results are to be the best that can be obtained. A typical instance is given of the inquiries which are made by the Medical Department into allegations of injury by vaccination. The report is by Dr. Page; it goes to show that the allegation was wholly groundless, and that a sickly child which happened to have been in every sense of the word successfully vaccinated, subsequently suffered from diarrhœa and sickness, was then drugged with soothing syrup, and died.

The inquiry which is being conducted by Dr. Ballard into the subject of the prevalence of autumnal diarrhœa in England is still in progress, and one very interesting aspect of the investigation is referred to in the report under consideration. This has to do with the relationship which exists between the disease as seen in England (and which is often called choleraic diarrhœa) and the malady which prevails as an endemic in some parts of India, and which at times spreads over various parts of the world. It is more than probable that some of the conditions under which the two diseases appear are either alike or have much in common, and it is by no means improbable that the difference between them has to do with a modification in those conditions which is brought about by some such circumstance as climate. Any light that can be thrown upon this obscure question will well repay the long-continued study which is being devoted to the diarrhœa investigation. With reference to cholera itself, a brief account of the Egyptian prevalence of 1883 is placed on record by Dr. Buchanan, who expresses a regret, which many will share with him, that the regular examination of prevalences of cholera and other Eastern diseases is no longer maintained. Formerly this work was ably carried out by Mr. Netten Radcliffe, and it appears more than strange that the country which, of all others, has the greatest interest in studying the etiology of cholera and other Asiatic diseases should maintain at its central bureau so "limited" a staff that it has become necessary to abandon a work of the highest importance to the interests and well-being of some millions of its citizens. Reading between the lines, it is quite evident that Dr. Buchanan does not consider that the results of the inquiry which was instituted by the British Government into the etiology of the Egyptian outbreak were at all conclusive. He points out that the importation of the disease by means of pilgrims returning from Mecca was not even excluded; he is of opinion that the mere occurrence of cases of a choleraic disease in various parts of Egypt by no means justifies the inference that cholera had long been endemic in that country; and he regrets that the application "of those inductive methods of investigation which are familiar to the practised sanitary inquirer of England" were not brought to bear upon the prevalence in question.

The volume contains a number of the more interesting reports issued by the several medical inspectors, investigations as to diphtheria taking a prominent position amongst those which are thus permanently placed on record. They have all been commented on by us as they have been issued, and we will only add, with regard to them, that we are glad to notice that an increasing number of these reports now find their way into the Medical Officer's Annual Report.

The more scientific part of the volume contains a further contribution by Dr. Burdon Sanderson on the products of putrefaction in relation to the prevention of disease, the investigation being conducted in connexion with researches which are being made into the value of different methods of disinfection. Dr. Klein also takes part in this inquiry, his efforts being directed to ascertain how far various substances have the ability to destroy that power which the microphytes of disease have of directly or indirectly producing disease. There are few inquiries which are more needed than this one, for at present but little more is known as to the respective merits of the various "disinfectants" than what their inventors choose to assert for them, and in one sense it is to be regretted that the final conclusions cannot more rapidly be arrived at. The difficulties attendant upon the investigation are, however, great, and they must be dealt with step by step. Mr. Dowdeswell also contributes to this part of the report a paper on the Etiology of Charbon Symptomatique, and its relations to other allied diseases. For the present we postpone detailed comment on this group of scientific papers.

REPORT OF THE SPECIAL INDIAN CHOLERA COMMISSION.

THE *Gazette of India* publishes the following report, dated Calcutta, Nov. 28th, 1884.

From Dr. J. M. Cuningham, Sanitary Commissioner with the Government of India, to the Secretary to the Government of India, Home Department.

I have the honour to submit, for the information of the Government, a short preliminary report by the English Cholera Commission of the results of their inquiries during their visit to India.

2. Their complete report will be passed through the press when they arrive in England, and submitted to the Under-Secretary of State for India.

3. It will be observed that Messrs. Klein and Gibbes' conclusions are altogether subversive of the statements advanced by Professor Koch as to the so-called "comma bacillus" being the cause of cholera.

From Drs. E. Klein and Heneage Gibbes to the Surgeon-General and Sanitary Commissioner with the Government of India. Dated Calcutta, Nov. 27th, 1884.

We have the honour to report that the investigations which we have hitherto carried on in Bombay and Calcutta have yielded the following results:—

1. The statement of Koch that "comma bacilli" are pre-

sent only in the intestines of persons suffering from or dead of cholera is not in accordance with the facts, since "comma bacilli" occur also in other diseases of the intestines—e.g., epidemic diarrhœa, dysentery, and intestinal catarrh associated with phthisis.

2. The "comma bacilli" in acute typical cases of cholera are by no means present in such numbers and with such frequency as to justify Koch's statement that "the ileum contains almost a pure cultivation of comma bacilli."

3. The "comma bacilli" are not present in the tissue of the intestine or elsewhere.

4. The "comma bacilli" in artificial cultivations, carried out by one of us (E. K.), do not behave in any way differently from other putrefactive organisms.

5. Mucus flakes of the ileum, taken out soon after death from typical acute cholera, contain numerous mucus corpuscles, many of them, filled with peculiar minute straight bacilli. The same bacilli occur also outside the mucus corpuscles. They are never missed even when the "comma bacilli" are.

6. These small bacilli have been cultivated by one of us (E. K.), and they do not behave differently from putrefactive organisms. They are not present in the tissues of the intestine or any other tissue.

7. No bacteria of any kind, and no organisms of known form and character, occur in the blood or any other tissue.

8. A good many experiments have been carried out by one of us (E. K.), with the following results:—(*a*) Mice, rats, cats, and monkeys were fed with rice-water stools, with vomit, with mucus flakes of the ileum, fresh and after having been kept for twenty-four to forty-eight hours. The animals remained normal. (*b*) Inoculations with recent and old cultivations of "comma bacilli" and the small straight bacilli, as well as with mucus flakes, were made into the subcutaneous tissue, into the peritoneal cavity, into the jugular vein, and into the cavity of the small and large intestine of rabbits, cats, and monkeys; but the animal remained perfectly well and normal.

9. The material which we have had hitherto at our disposal has been very good and abundant, and, as far as the microscopic work goes, we do not think we shall require any more material. We therefore propose concluding our inquiry by the beginning of December, and hope soon after to return to England.

THE CULTIVATION OF THE BACILLUS OF TUBERCLE.

DR. CREIGHTON has expanded the criticism passed on Dr. Koch's method of cultivating tubercle bacillus at the last meeting of the Royal Medical and Chirurgical Society into a *brochure*, the substance of which is as follows:—In the first place Dr. Creighton points out that Koch has not availed himself in such cultivations of the "dry" method, whereby alone exclusion of foreign germs can be secured. Koch has sought, not to separate the tubercle bacilli from admixture with other organisms, but only to detach them from the tuberculous matter in which they occur. He takes a piece of tubercle from the dead-house, strips off its outer layers, and crushes the surface in corrosive sublimate. The mass thus prepared is placed on the surface of solidified blood serum in a test-tube and crushed into fragments, the tube being then kept at a temperature of 98° F. for three weeks; at the end of that time some of the dried scales which have formed on this surface are transferred to another test-tube and treated as before. Dr. Creighton contends that, although Koch gives no further information on the process, he "has departed from the first principle of pure cultivation of micro-organisms—namely, the principle of transferring only a minimal or fractional quantity from one test-tube to the next." He includes Mr. Watson Cheyne in the indictment, who followed the same process, and who assumed that thereby the original cheesy matter is wholly destroyed, the organisms alone remaining. There is no evidence, he maintains, to show that the final inoculations contained bacilli and nothing else. The substance put into the test-tubes was tubercle "and it came out tubercle, baked, indeed, to crusts and scales, but still tubercle." Moreover, the method actually employed by Koch hindered the free development of the bacilli, as it prevented the growth of other micro-organisms. Schüller, who adopted fluid cultivations direct from tubercular matter, obtained cultures of various organisms (which must have been descended from those originally present in the tubercle), and yet failed to inoculate animals with the disease by means of the bacterial fluid thus obtained. Dr. Creighton's closing remarks sufficiently indicate his position and the distrust he has of the bacilli being proved by Koch's experiments to be the specific virus of the tubercle. He says:—

"The truth is that Dr. Koch was scrupulously careful to keep his bacilli always dry and always cohering in what he calls 'colonies.' His attempts to grow them in fluids were half-hearted; the bacilli were involved in brittle conglomerates or crusts, after long exposure of the tubercular tissue to heat, and they never had a fair chance to multiply in fluid. If they had been set free in a suitable fluid medium, they would certainly have multiplied, and multiplied with marvellous rapidity. *But they would have been no longer motionless rod-shaped organisms.* They would have been moving bacteria and micrococci; we know that much from the experiments of MM. Toussaint, Klebs, and Schüller. To retain the bacillar form it is necessary to keep the organisms in tubercle always dry. That must have been Dr. Koch's main reason for practising a dry method of 'pure' cultivation, which resembled his original dry method in little more than the name. He certainly succeeded in making the rod-shaped organisms to multiply as rod-shaped organisms; he avoided the awkward breach in their morphological identity, which would have confronted him if he had let them multiply in fluids, as they are more than willing to do. At the same time he unfortunately retained in the crusts and scales the detritus of the pieces of tubercle with which he set out. Thus, under the guise of his dry method, he not only succeeded in preserving the morphological identity of the bacilli as they mostly occur in tubercular degenerations within the body, but he also preserved among his inoculation material a sufficient quantity of that which we must still consider to be alone infective in tubercle—namely, the virus of the tubercular tissue itself."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 4353 births and 3386 deaths were registered during the week ending the 27th ult. These registered numbers were, owing to the Christmas holidays, very considerably below the average weekly numbers. The annual death-rate in these towns, which had been equal to 24·4, 22·6, and 21·6 per 1000 in the preceding three weeks, further declined last week to 20·2. During the thirteen weeks ending last Saturday the death-rate in these towns averaged 21·4 per 1000, against 23·0 and 21·2 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 13·2 in Birkenhead, 13·8 in Plymouth, 15·9 in Salford, and 16·2 in Brighton. The rates in the other towns ranged upwards to 26·8 in Hull, 28·3 in Preston, 28·4 in Sunderland, and 32·2 in Leicester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 393 and 398 in the preceding two weeks, did not exceed 311 in the week ending last Saturday; these included 69 from whooping-cough, 67 from measles, 54 from scarlet fever, 30 from small-pox, 34 from "fever" (principally enteric), 28 from diphtheria, and 23 from diarrhœa. No death from any of these zymotic diseases was returned last week in Plymouth, Birkenhead, or Huddersfield, whereas they caused the highest death-rates in Leicester, Preston, and Sunderland. The greatest mortality from whooping-cough was recorded in Wolverhampton, Oldham, and Halifax; from measles in Preston, Cardiff, and Leicester; from scarlet fever in Cardiff and Sunderland; and from "fever" in Preston and Norwich. The 28 deaths from diphtheria in the twenty-eight towns included 20 in London, 2 in Norwich, 2 in Liverpool, and 2 in Sunderland. Small-pox caused 47 deaths in London and in its outer ring of suburban districts, 3 in Liverpool, and 1 in Brighton. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 1019 and 1026 on the preceding two Saturdays, further rose to 1076 at the end of last week; the admissions declined, however, to 161 last week, from 263, 190, and 244 in the previous three weeks. The Highgate

Small-pox Hospital contained 95 patients on Saturday last, against 99 at the end of the previous week; 14 cases were admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined from 511 to 416 in the preceding four weeks, further declined to 370 last week, and were 206 below the corrected weekly average. The causes of 82, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Newcastle-upon-Tyne, Norwich, Plymouth, Derby, Birkenhead, and Halifax. The largest proportions of uncertified deaths were registered in Sheffield, Blackburn, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 31·8, 28·3, and 26·9 per 1000 in the preceding three weeks, rose again to 29·6 in the week ending 27th ult., and was no less than 7·4 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 19·5 and 20·4 in Leith and Edinburgh, to 32·1 in Paisley and 34·7 in Glasgow. The 691 deaths in the eight towns included 34 which were referred to measles, 26 to whooping-cough, 16 to scarlet fever, 14 to "fever," 11 to diarrhœal diseases, 9 to diphtheria, and not one to small-pox; in all, 110 deaths resulted from these principal zymotic diseases, against 140, 109, and 108 in the preceding three weeks. These 110 deaths were equal to an annual rate of 4·6 per 1000, which was 2·7 above the mean rate from the same diseases in the twenty-eight English towns. The 34 deaths from measles in the Scotch towns were within two of the number in the previous week, and included 30 in Glasgow. The fatal cases of whooping-cough, which had been 30 and 25 in the previous two weeks, were 26 last week, of which 14 occurred in Glasgow and 3 in Edinburgh and in Greenock. All the 16 deaths from scarlet fever, showing a considerable increase upon recent weekly numbers, were returned in Glasgow. The 14 deaths referred to "fever" also exceeded the numbers returned in recent weeks, and included 10 in Glasgow and 3 in Aberdeen. Seven of the 11 deaths attributable to diphtheria also occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 231, 190, and 178 in the preceding three weeks, further declined to 174 last week, but exceeded by 66 the number returned in the corresponding week of last year. The causes of 116, or nearly 17 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 28·7 and 34·1 per 1000 in the preceding two weeks, declined again to 26·6 in the week ending the 27th ult. During the thirteen weeks ending last Saturday the death-rate in the city averaged 29·4 per 1000, the mean rate during the same period not exceeding 19·8 in London and 19·7 in Edinburgh. The 179 deaths in Dublin last week showed a decline of 50 from the number in the previous week, owing in great measure to the Christmas holidays causing delay in registration; they included 13 which were referred to the principal zymotic diseases, against 24 and 18 in the preceding two weeks. Of these 13 deaths, 7 resulted from scarlet fever, 5 from "fever" (typhus, enteric, or simple), 1 from diphtheria, and not one either from small-pox, measles, whooping-cough, or diarrhœa; they were equal to an annual rate of 1·9 per 1000, the rate from the same diseases last week being 1·7 in London and 0·8 in Edinburgh. The fatal cases of scarlet fever in Dublin, which had steadily declined from 16 to 6 in the preceding five weeks, rose to 7 last week. The 5 deaths referred to "fever" also exceeded the number in the previous week. Nine inquest cases and 6 deaths from violence were registered within the city, and 61, or more than a third of the deaths, were recorded in public institutions. The deaths, both of infants and of elderly persons, showed a decline from recent weekly numbers. The causes of 30, or nearly 17 per cent., of the deaths registered during the week were not certified.

ENGLISH MORTALITY IN 1884.

It will be nearly a month before the Registrar-General issues his quarterly return for the last three months of 1884. The English death-rate during that period may, however, be approximately estimated from the thirteen weekly returns, which give the mortality statistics for nearly nine millions of population living in the twenty-eight large towns dealt with in that return. On the hypothesis that the death-rate in England and Wales last quarter bore the same relation to the rate recorded in the twenty-eight large towns, as was the case in the last quarters of 1882 and 1883, it may be estimated at 19·0 per 1000, and to have been 1·6 below the mean rate in the ten preceding corresponding quarters. The death-rate in the third or summer quarter exceeded the average, owing to the heat that prevailed in the first half of August; but in each of the other quarters of the year the rate was considerably below the average. The mean rate for the four quarters of the year was 19·3 per 1000, against 18·9, 19·6, and 19·5 in 1881, 1882, and 1883, and was 1·4 below the mean rate in the ten years ending 1883. Thus the marked decline in the English death-rate which has been coincident with the operation of the Public Health Acts of 1872 and 1875 is being fully maintained. The English death-rate was practically stationary during the thirty years 1840-70 at 22·4 per 1000, signifying that the sanitary achievements of that period had only been successful in counteracting the baneful effect, from a health point of view, of the rapid increase of urban aggregation. In the five years 1871-75 the rate slightly declined to 22·0, and in the following five years, 1876-80, fell to 20·8. In the first four years of the current decade, ending on the 31st ult., a further marked decline occurred, and the mean annual death-rate in these years did not exceed 19·3. The death-rate in each of those four years was lower than in any of the forty-three previous years of civil registration. It was shown in a paper recently read before the Statistical Society that the effect of the reduction in the English death-rate in the five years 1876-80 upon the duration of life in England, if continued, would be to add two years to the life of every male, and three and a half years to the life of every female born. The continued and increased reduction of the English death-rate in the last four years is therefore an event the national importance of which cannot well be over-rated.

THE SERVICES.

Surgeon-Major Sir Samuel Rowe, K.C.M.G. (Governor and Commander-in-Chief of the Gold Coast Colony), has been appointed Governor and Commander-in-Chief of the West Africa Settlements; Surgeon-General J. Hindley, C.B., has been appointed to succeed Surgeon-General R. Gilbourne as principal medical officer on the Staff of Lieut.-General Sir A. Alison, K.C.B., at Aldershot.

BENGAL MEDICAL ESTABLISHMENT.—Surgeon-Major Archibald Hamilton Hilson, M.D., to be Brigade Surgeon; Surgeons Matthew Denis Morcarty, Gordon Price, M.D., Edward Bovill, Bartholomew O'Brien, M.D., George Albert Dundas, Henry Walter Hill, Zalnoor Allee Ahmed, M.D., William Arthur Gilligan, William Edwin Griffiths, to be Surgeons-Major.

MADRAS MEDICAL ESTABLISHMENT.—Surgeons Edward Levinge, Augustus Napoleon Rogers-Harrison, Lionel Beech, Henry Plunkett Esmonde-White, to be Surgeons-Major.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon W. H. Colahan, to the *Assistance;* Staff Surgeon G. B. Murray, to Plymouth Hospital; Staff Surgeon Thomas Bolster, to the *Triumph;* Surgeons F. H. Trevan and R. J. Lawson, to the *Triumph;* Surgeon John Hunter, to the *Indus;* Staff Surgeon Henry Scanlan, to the *Nankin*, additional; Fleet Surgeon Robert Nelson, to the *Monarch;* Surgeon Samuel Johnson, to the *Briton;* and Surgeon Herbert W. G. Doyne, to the *Agincourt.*

THE DRAINAGE OF THE LOWER THAMES VALLEY.—The Local Government Board inquiry with reference to the applications of various constituent authorities for separation from or dissolution of the Lower Thames Valley Main Drainage Board was resumed for the eleventh day at Kingston on the 30th ult. Evidence was adduced on behalf of the joint board and in favour of the scheme of Sir Joseph Bazalgette for the total diversion of the sewage of the district to Crossness, immediately contiguous to the southern outfall of the main drainage works of the Metropolitan Board of Works. The inquiry was again adjourned.

MAHOMED MEMORIAL FUND.

THE following additional subscriptions have been either received or promised:—

	£	s.	d.
C. E. Abbott, Esq.	1	1	0
W. E. Audland, Esq.	1	1	0
H. Cosmo Bonsor, Esq.	5	5	0
J. F. Briscoe, Esq.	1	1	0
Dr. Broadbent	26	5	0
Nat. P. Blaker, Esq.	5	5	0
H. T. Butlin, Esq.	5	5	0
Dr. Buzzard	10	10	0
Francis Bayley, Esq.	1	1	0
W. Morrant Baker, Esq.	5	5	0
Fredk. Barron, Esq.	5	5	0
Dr. Henry Barnes (Carlisle)	2	2	0
Dr. W. H. Bruce	2	2	0
Dr. Thomas Barlow (instalment)	10	0	0
Dr. Bradbury (Cambridge)	2	2	0
C. A. Ballance, Esq.	2	2	0
Mrs. J. A. Baths	4	4	0
Edward Berney, Esq.	2	2	0
Sir Edmund Beckett, Bart.	5	0	0
Miss Behrens and her Brothers	100	0	0
Dr. Lauder Brunton	10	10	0
E. H. Cardwell, Esq.	5	0	0
Sir Andrew Clark, Bart.	50	0	0
Dr. Edward Clapham	1	1	0
L. A. Dunn, Esq.	2	2	0
Dr. Dakin	1	1	0
C. D. E., per W. Morrant Baker, Esq.	5	5	0
Owen Fowler, Esq.	1	1	0
Professor Flower	5	5	0
Dr. Philip Frank	5	5	0
Dr. Glover	5	5	0
Dr. Herbert Griffiths	1	1	0
Dr. Gairdner	5	5	0
Francis Galton, Esq., F.R.S.	20	0	0
Dr. J. C. Hare	15	15	0
Howard Hawkins, Esq.	2	2	0
Dr. Habershon	10	10	0
Dr. George Harley	2	2	0
T. Hyde Hills, Esq.	10	10	0
Dr. Robert Harris	2	2	0
Dr. Horrocks	5	5	0
Dr. Alexander Henry	2	2	0
Dr. Handfield Jones	1	1	0
Dr. W. Beech Johnston	2	2	0
Percy S. Jakins, Esq.	1	1	0
W. H. Jalland, Esq	1	1	0
A. A. Jayes, Esq.	0	10	6
Dr. Percy Kidd	1	1	0
W. F. Laycock, Esq.	3	3	0
Sir Joseph Lister, Bart	50	0	0
R. C. Lucas, Esq	5	5	0
Dr. Vawdrey Lush	5	5	0
J. H. Lister, Esq.	5	5	0
Dr. George Mickley	1	1	0
W. L. Marshall, Esq.	0	10	6
Dr. Duncan Mackenzie	1	1	0
Shirley F. Murphy, Esq.	3	3	0
E. Rice Morgan, Esq.	1	1	0
Dr. Norman Moore, Esq.	5	0	0
E. Nettleship, Esq.	5	5	0
J. A. M. O.	1	1	0
Dr. W. Miller Ord	5	5	0
Sir Henry Peek	5	5	0
A. J. Pepper, Esq.	5	5	0
Frank T. Paul, Esq.	2	2	0
C. J. W. Pinching, Esq.	1	1	0
Dr. G. E. Paget	3	3	0
Dr. W. O. Priestley	10	10	0
Dr. G. Owen Rees	10	10	0
Dr. Frederick Robinson	1	1	0
E. S. Robson, Esq.	1	1	0
W. T. Rabbits, Esq.	5	5	0
O. R.	0	10	0
J. A. Shaw Stewart, Esq.	5	5	0
Hugh C. Smith, Esq.	5	5	0
Dr. Steele	5	5	0
Dr. Savage	5	5	0
C. J. Symonds, Esq.	3	3	0
Dr. Saundby	1	1	0
T. Sympson, Esq. (Lincoln)	1	1	0
W. S. Savory, Esq.	10	10	0
Alfred Scott, Esq.	2	2	0
Dr. Graham Steell	3	3	0
Dr. H. J. Sanderson	2	2	0
Dr. P. C. Smyly, Esq. (Dub.)	1	1	0
Sir Henry Thompson	10	10	0
Dr. George Turner	10	10	0
Charles Ticehouse, Esq.	2	2	0
T. Pridgin Teale, Esq.	2	2	0
Francis Vacher, Esq.	5	0	0
Rev. A. B. Valpy	1	1	0
H. Vaughan, Esq.	10	0	0
Edgecombe Venning, Esq.	2	2	0
Henry Williams, Esq.	1	1	0
Dr. Walshe	5	5	0
C. H. Wells, Esq.	0	10	6
Holland Wright, Esq.	1	1	0
Dr. Waggett	2	2	0
Dr. T. Davies Welch	5	5	0
Peter Whitley, Esq.	10	10	0
Dr. Burney Yeo	3	3	0

ARTHUR E. DURHAM, Treasurer.
JAMES F. GOODHART, } Secretaries.
W. H. A. JACOBSON, }

Correspondence.

"Audi alteram partem."

THE EXTINCTION OF CHOLERA EPIDEMICS IN FORT WILLIAM.

To the Editor of THE LANCET.

SIR,—My attention has been called to an article under the above heading in THE LANCET of December 13th. Before entering on the subject of that communication I particularly desire to obviate any misapprehension that may arise in regard to it. I have not dwelt on the importance of having a pure water-supply, because it appeared to me superfluous to do so. No one entertains any doubt on that subject; it forms an elementary principle of sanitation, and is accepted as an axiom in sanitary science. But that is not the point. The question raised was whether the spread of cholera can be exclusively attributed to the use of contaminated water, and whether such water "communicated" cholera to a population drinking it by virtue of its containing a specific cholera contagium. I contend that this latter has never been proved; nor is it likely to be, seeing that it would be inadequate to explain all the facts, and is inconsistent with some of them. It would certainly surprise me if a regiment drawing its supply of drinking-water from an impure source did not, other things being equal, during an epidemic of cholera, suffer disproportionately from that disease as compared with another regiment supplied with pure water. But if I may rely upon the recorded experience of others, fortified with some results within my own knowledge, I should say that the habitual, or even occasional, use of a saline aperient at such times would have a still more prejudicial effect. And, if I may be pardoned the digression, I may remark before the comma bacillus culminates in a full stop, that it is very difficult to reconcile the notion of its enormous multiplication and development in the intestines being the cause of cholera, with the well-grounded, as I think, observations of practical men that diarrhœa is very prevalent in times of epidemic cholera, and that one's only chance of curing the disease is to arrest it in its initial stage—in other words, to shut up the morbific agent inside the intestines of its unfortunate host. I do not, of course, assert that all cases of diarrhœa develop into collapsed cholera; how many may do so is another thing.

It has been again and again put forward that the relative immunity of Fort William from cholera of late years is attributable to the introduction of a pure water-supply, and by a pure water-supply was meant the Municipal water. That is certainly what I have been told, and understood from documents to which I have referred. Many years ago, however, I came upon an extract from the proceedings of the Government of India in the Military Department, dated 11th October, 1871, in which it is stated that the Government did not consider it expedient to incur the expenditure necessary for the introduction of the municipal water because "the troops in Fort William had proved for years past *remarkably healthy*." (The italics are mine.) It is now asserted that there was another and improved water-supply completed in 1865 to which this result must be ascribed. So far as I can gather, however, water from the same source—viz., rain water more or less filtered through clean grass ground and collected in the Havildar's tank—was used up to the introduction of the municipal water, but some additional means for filtering it were added and its distribution was by hydrants instead of by mussacks. Of course, the increased facility for obtaining this water would lessen the liability of native servants to obtain it from other sources. The complaint about this tank water was not as to quality, but that the supply was limited and apt to fail. "The tank water is pronounced by the chemical examiner to Government to be remarkably pure and wholesome. This might be expected from the fact of its being rain water stored up and secured from all contamination."—(*Vide* Report, dated 19th June, 1860, signed by the Brigadier Commanding, the Garrison Surgeon, and officiating Garrison Engineer, Fort William.)

Moreover, if the past records of this garrison[1] be examined

[1] The statistics given in the accompanying table have been compiled for the most part from Dr. Bryden's works and from the Reports of the Sanitary Commissioners with the Government of India.

Table showing the Average Strength and Number of Deaths from Cholera among European Troops in Fort William between 1826 and 1882.

Year.	Average strength.	No. of deaths.	Year.	Average strength.	No. of deaths.
1826	603	46	1855	—	—
1827	901	18	1856	543	41
1828	925	13	1857	—	—
1829	896	14	1858	770	55
1830	1068	11	1859	1311	9
1831	843	4	1860	1196	40
1832	776	2	1861	1056	9
1833	685	5	1862	880	13
1834	602	3	1863	745	4
1835	738	—	1864	790	2
1836	732	—	1865	789	1
1837	663	1	1866	861	2
1838	623	8	1867	739	2
1839	667	2	1868	858	5
1840	733	17	1869	904	—
1841	602	23	1870	875	2
1842	954	59	1871	800	—
1843	1114	15	1872	828	1
1844	806	7	1873	859	1
1845	457	14	1874	954	1
1846	467	21	1875	922	—
1847	557	2	1876	934	3
1848	758	9	1877	855	1
1849	883	4	1878	941	2
1850*	—	—	1879	731	—
1851	—	20	1880	779	—
1852	—	20	1881	926	1
1853	—	13	1882	963	1
1854	—	—	1883	854	1

* The statistics of troops from 1850 to 1857 are very imperfect.

it will be found that at a date long antecedent to the introduction of the improved water—viz., between 1830 and 1840—the mortality from cholera was very low. If we take seven consecutive years within that period, as compared with seven years intervening, 1865 to 1871, between the introduction of the two water-supplies to the fort, we find that there was only a small difference between the average annual death ratio from cholera for the two periods—viz., 2·97 per 1000 for the earlier, and 2·18 for the latter period. During the ten years from 1870 to 1879 there has been a marked decline in the mortality from cholera among the European troops in the Bengal Presidency as a whole; the average mortality has been 4·18 as compared with 9·24 per 1000 in the ten previous years; and it is not asserted that these improvements in health and water-supply have been conterminous; contrariwise, the present state of that supply in Bengal is still alleged by some to be the sole cause of epidemic cholera. But if we compare the ratio of deaths from cholera among European troops in Calcutta and the neighbouring garrisons, we find that from 1866 to 1874 in Fort William it was 2·18, as against 1·15 in Dum-Dum and 0·79 in Barrackpore per 1000; and from 1872 to 1882 it was 1·13 in Fort William, 0·74 in Dum-Dum, and 0·51 in Barrackpore per 1000. Moreover, one and the same cause cannot well be productive of two opposite effects. The introduction of the municipal water into Fort William has, it is alleged, caused the relative immunity from cholera enjoyed by that garrison; but I believe I am correct in stating that its introduction into Alipore gaol in water carts deriving their supply straight from the hydrants was followed by a mortality from cholera in 1879 alone equal to that of the previous seven years, during the greater part of which period, at any rate, the convicts were supplied from the local tank. By a parity of reasoning, we are as much justified in drawing a similar deduction in the one case as in the other; and yet we know that one would be false. May not both?

Take the town and district of Dacca. A new water-supply was introduced into the former and a considerable fall took place in the cholera death-rate, which might fairly have been attributed to that as a cause; but there was contemporaneously a great improvement in the district which had not had the benefit of the new water-supply.

Now, let us advert to an example in which great pains had been taken to secure a good water-supply for a service of steamers. Dr. Crombie, now at Dacca, a competent and experienced man, kindly sent me a letter he had received from the emigration medical officer at Goalundo, dated April 9th, 1882:—"It is rather strange that just as we were talking of the occurrence of cholera amongst emigrants and the water-supply arrangements on board the Assam steamers, a severe outbreak of cholera was going on on board one of those steamers. Since then we have had one of the severest outbreaks that has occurred for years, seventy-two cases with thirty-four deaths, out of a population of less than four hundred! The water arrangements were perfect, and no fault whatever could be found with the steamer."

A great many changes and improvements have been effected in Fort William besides the introduction of the water, beginning with the construction of those airy, lofty barracks known as Dalhousie Barracks in 1859, and including great improvements in drainage; in brief, there has been sanitary improvement all round. But have we any assurance, after all, that the garrison at Fort William may not again suffer from cholera? It is more than I should like to affirm.

If it can be said that a pure water-supply will be absolutely protective against an epidemic of cholera in Fort William, this must be pushed to a logical conclusion, and the same thing can be postulated of every other place. Now, to say that the state of the water-supply will account for the recent epidemic in Egypt, France, Naples, and Spain, requires more boldness of assertion than I possess.

The question of the improved medical history of the garrison of Fort William is a very interesting and instructive one, and worthy of exhaustive investigation. There are two methods in which this may be made. One, accepting the fact, to examine into all the causes likely to account for it; the other, to accept the theory of water contamination as a fact, and then to see whether the results can be ascribed to its absence. I prefer the former method.

I am, Sir, yours truly,

J. A. MARSTON,
Deputy Surgeon-General.

Dec. 20th, 1884.

TREATMENT OF INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—Anyone who reads Mr. Steele's letter in your last number can only come to the conclusion that, when I said in the debate on obstruction of the bowels at the Liverpool Medical Institution that the treatment by "rest, starvation, and opium had for many years been the recognised treatment," I purposely overlooked the labours of Mr. H. O. Thomas in this direction, as set forth in his book published last year. I certainly had no such intention. It has been my privilege, both in speech and in writing, to give my highest tribute of praise to Mr. Thomas for the admirable work he has done in another department of surgery, and therefore it is very unlikely that I would seek to deprive him of his just due in this. Mr. Thomas, however, in his speech at the Medical Institution arrogated no such claims for himself as are advanced by your correspondents, but modestly told how the real credit of the method of treatment under discussion was due to none other than Sydenham. Surely Mr. Thomas must pray to be saved from his friends. I most gladly acknowledge the valuable work done by him in pushing the doctrine of rest and opium, even although to some he may almost seem to have done so to an extreme point. He has drawn men's minds forcibly to the question, and has put it upon a better defined basis. He has shown how milk is a bad form of nutriment, and has exposed the positive dangers of certain forms of mechanical treatment. For this he deserves, and has, our grateful thanks.

But if I am asked where I learnt the principles of rest and opium, I reply that I first knew of them from Laycock and Christison in 1863; although even before that I had heard Miller tell how Liston used to say that the bowels in cases of obstruction were to be opened, not with purgatives, but with opium and the lancet. In 1867 appeared Brinton's remarkable little book, and from that date I should think there is not a single teacher in Great Britain who has not taught on his lines. There has certainly not been one at the Liverpool School of Medicine, for I have asked every one of them what they have been in the habit of teaching. Looking over Dr. Cameron's notes for his lectures twenty years ago, when lecturing on obstruction, I find the following headings:—"Opium the remedy; constipation a necessary and curative symptom (principle of rest); purgatives to be avoided." Dr. Waters, in his remarks at the Institution, said that until acute symptoms had quite subsided his treatment was "absolute rest, complete, or almost complete, abstinence from food, and the exhibition of opium and belladonna." In Aitken, Bartholow, Roberts, and Quain the same text will be found preached. In Ziemssen, Leichtenstern will be found following the footsteps of Brinton. Gentlemen who cannot see anything of the rest, starvation, and opium treatment in these works are determined not to see. Mr. Treves, in the very latest book on the subject, has been accused of knowing nothing about this treatment. I read in it: "It is worse than useless to attempt to feed these patients by the mouth. The patient may have ice to suck to relieve the sense of distressing thirst, but, apart from this, all food should if possible be administered by the rectum. There is certainly no one drug of more use and value in cases of intestinal obstruction than opium."

Personally I may say that during the eighteen years I have practised in Liverpool I have seen as many cases of intestinal obstruction as falls to the lot of most men of my own age, and I never heard of any other treatment being employed, so soon as it was once discovered that the case was one of so-called obstruction, and not a mere ordinary attack of constipation. And here is where Mr. Steele quite fails to apprehend the matter. In cases of acute obstruction, with symptoms similar to those of a sharply strangulated hernia, only one treatment can be and is employed, and none other—viz., rest, starvation, and opium, and, failing these, operation. But under the name chronic obstruction we are unfortunately obliged to class a variety of cases which differ infinitely in character from those which are produced by utterly irremediable causes to those which are termed merely "functional" cases. Now, every case of chronic obstruction begins just like any simple case of constipation, and, in the first instance, is to be treated as such. Things would come to a remarkable pass if the minute a man missed his daily motion for two or three times

he was to be subjected to the treatment for serious obstruction when a dose of castor oil or a tumbler of warm water in the rectum was all he wanted. As regards the use of calomel, any physician of experience will tell Mr. Steele that minute doses of that drug are often most valuable in allaying distressing irritability of the stomach, while they cannot possibly add to the dangers of the obstruction. Concerning nutrient enemata in certain very protracted cases of obstruction, some sustenance, however slight, must be given to the patient, otherwise he will die of exhaustion before his cure is effected. Experiment has incontestably proved that with the artificially digested aliments now in use life can be wonderfully supported by rectal feeding, while bowel irritation is reduced to a minimum. Concerning the use of inflation of the bowel in certain cases of intussusception one must remember that much that has been tried in that way has been in the form of experiment. And legitimate experiment too; for, after all, even rest and opium are mightily unsuccessful in really serious cases of obstruction, however much they may do for those cases which would have got well under any treatment, like the cases of diphtheria which some practitioners are always curing in vast numbers. And there is a limited number of cases where a low intussusception has been made out with certainty in children, where inflation undoubtedly has been most successful, a fact which cannot be controverted.

I rather regret that Mr. Steele, in his eagerness to champion Mr. Thomas, should have found it incumbent upon him to charge an old teacher and friend with lack of generosity to a fellow surgeon, but to that charge I have pleaded not guilty. I must, however, with much deference to the greater knowledge of Mr. Steele, adhere to my statement that for many years, rest, starvation, and opium have constituted the recognised treatment for intestinal obstruction by all intelligent and well-educated practitioners, and that this treatment was not for the first time heard of in 1883. I am, Sir, your obedient servant,

Liverpool, Dec. 1884. W. MITCHELL BANKS.

To the Editor of THE LANCET.

SIR,—In the recent interesting debate at Liverpool upon the question of the treatment of intestinal obstruction, Mr. Mitchell Banks is reported to have made the following statement: "The second difficulty consisted in the fact of spontaneous recovery under the opium, rest, and starvation treatment, which has now for many years been the recognised practice." (THE LANCET, Dec. 6th.) I am somewhat surprised to find that no less than three of your correspondents take very decided exception to this statement. They dispute the assertion that the treatment named is a recognised mode of practice. Mr. Steele of Liverpool and "A Provincial Man" pay me the high compliment of observing that the measure is not generally recognised, because it is "not even alluded to" in my recent work upon intestinal obstruction. Mr. Steele, moreover, claims that this mode of treatment "was undoubtedly originated by Mr. H. O. Thomas." In venturing to meet the objections that these gentlemen have raised, I might be allowed, in the first place, to endorse Mr. Banks's statement. With regard to the allusions to my work that have been so kindly made, I can only say that I have endeavoured in the book named to give especial prominence to this very measure. I have urged it—speaking especially of acute and subacute cases—not only as the primary and elementary basis of all treatment, but as a measure to be adopted by routine. In the chapter on treatment I deal first with "the feeding of the patient," or, as the paragraph would be as well headed, with "the starvation of the patient," and then proceed to the use of "opium." The question of rest falls under the consideration of these two factors in the treatment.

In detailing these measures I did not imagine that I was dealing with any "new thing," but rather that I was expressing as clearly as I was able the recognised measures adopted in the first treatment of intestinal occlusion. With regard to the claim made on behalf of Mr. Thomas, I regret that I did not see his able and original monograph until the MS. of my book was entirely in type. The chief feature of Mr. Thomas's work appeared to me to consist in a very skilful and vigorous advocacy of the measure now in question—a measure the value of which I considered had been for years generally recognised. I cannot agree with Mr. Thomas in considering this particular treatment as final and all sufficient. It appears to me to be the best primary routine treatment, and the best introduction to such other and more active measures as the needs of particular cases may possibly demand. I am, Sir, yours faithfully,

Gordon-square, W.C. FREDERICK TREVES.

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—You have often allowed me at this season of the year to plead in your columns the cause of the widow and fatherless, and of the old, broken-down or unfortunate who depend on the British Medical Benevolent Fund for some small addition to their comfort or, very frequently, for relief from actual want, and help was never more needed than at this moment. The scheme of the charity is well known in the profession. It has two departments, one for giving annuities of £20 or £26 (10s. a week) to worn-out members of the profession, their widows or daughters, after the age of sixty; the other for the relief of pressing necessity by donations. The annuitants, who are maintained by the proceeds of investments, now number fifty-three, but it is very rarely that anyone can be elected under the age of seventy. The donations are furnished out of money collected year by year, and it is on this department of the fund that the greatest pressure comes. The number of applications during the year has been 241; the amount distributed over £1900, in sums varying from £1 to £24. Examples of the cases coming before the Committee at the monthly meetings are as follows:—F.R.C.S., aged seventy-four, of excellent character, hears of the fund when he has broken into his last sovereign; he gets an immediate advance of £2 and a further grant of £15. The daughter of a medical man, a nursery governess, applies on behalf of her brother, himself qualified, who is dying of phthisis; £12 is voted, payable in weekly instalments; he dies before it is exhausted. Medical men in failing health, widows suddenly left destitute with young children or striving bravely to bring up a numerous family, daughters of medical men worn out or broken down as governesses—these are our everyday applicants. A few are kept from actual pauperism or starvation entirely through the fund. The profession has responded most liberally to special appeals for exceptional cases. This is natural and praiseworthy, yet I cannot but fear lest the chronic, prosaic misery of the clients of this fund be lost sight of. Our exchequer is nearly empty, and I again ask those who can afford it for contributions to enable us to continue our help to the less fortunate of our brethren. They will be most thankfully received by Mr. Field, 31, Lower Seymour-street, or by

Your obedient servant,

34, Seymour-street, Portman-square, Dec. 31st, 1884. W. H. BROADBENT, M.D., Treasurer.

THE UXBRIDGE TRAGEDY.

To the Editor of THE LANCET.

SIR,—In reference to the above case, I feel confident that the writer of the paragraph in your last issue was not himself present at the trial, and did not hear the medical evidence; and I would suggest that it is scarcely fair to condemn that evidence—given by Mr. Parrott and myself—as being contrary to pre-existing knowledge, upon the very imperfect, and in many respects entirely erroneous, reports in the daily papers.

The writer says: "The inferences of the medical witnesses were at variance with similar known facts in other cases on record, in which a shot has been fired by a suicide in the interval between the infliction of a mortal wound, even of the heart, and death." First, with reference to your mention of the heart wound, it would seem that the writer has fallen into the same error as many well-intentioned correspondents to the daily papers in assuming that, in order to explain the case as one of suicide, it is necessary to presuppose the possible self-infliction of other wounds after that of the heart. There is no necessity to make any such difficulty, for, viewing the case as one of suicide, there was a much more simple explanation, and one which I fully allowed—namely, that the heart wound was the last of the

three inflicted on the front of the body and face of the deceased. And not only did I allow of such a possibility, but I further stated that an examination of one of these three wounds—that beneath the clavicle—convinced me that it, at any rate, had been received before the heart was damaged. The sequence of the different injuries was thus arranged in the manner most favourable to the prisoner, and she benefited by whatever doubt there might have been on this score. You will thus see, Sir, that if the heart wound is considered as being the last of the three inflicted on the front of the body, the duration of life after its causation is not a very material point. Nevertheless, the statement that in my opinion death would result therefrom "within two minutes" was made by myself with a full knowledge that life has been prolonged, and that recovery even has followed, after some wounds of the heart.

Your paragraph is certainly vague—perhaps intentionally so; but it implies that the prisoner was not allowed by the medical witnesses the benefit of the doubt as to the possibility of the deceased firing more than one shot into himself, and, to anyone who has read the reports in the daily papers, it undoubtedly would convey the idea that I had denied the possibility of the self-infliction of all of the three wounds found on the front of the body and face of the deceased. Will you allow me to state very definitely that, both at the Uxbridge Sessions and at the Central Criminal Court, I did allow the possibility of the self-infliction of the third wound in spite of the injuries caused by the two others previously inflicted. Then, as to the wound in the back, the writer says: "Moreover, a wound in the back is peculiarly likely to be self-inflicted if the suicide falls forward or on his side while the arm still clutching the pistol is convulsively drawn, stiffened, and by the fall twisted back."

Do you really suppose, Sir, that any reasonable man would doubt that "*a wound in the back*" could be self-inflicted? The question is, Could this particular wound be self-inflicted? I said, and say again, most emphatically that it could not, and yet the writer of your paragraph, who never heard my reasons for this opinion, nor saw the wound, has no trouble in explaining the difficulty which neither the counsel for the defence nor any of the jury were able to solve.

I think, Sir, you will see that the charge made against the medical evidence has been made hastily and on insufficient grounds. Other matters went to the jury besides those reported in the daily papers, and I would ask both you and your readers to reserve their judgment until I am able to put the real facts before you.

Yours truly,

Queen Anne-street, Dec. 30th, 1884. ANTHONY A. BOWLBY.

*** We did not assume, as Mr. Bowlby seems to think, "that in order to explain the case as one of suicide it is necessary to presuppose the possible self-infliction of other wounds after that of the heart," but obviously wrote with the purpose of illustrating what may be done after a fatal wound of a vital organ. We do not, therefore, deem it a duty to correct an imaginary error. Mr. Bowlby's reference to "well-intentioned correspondents to the daily papers" lies wide of the issue raised in our last week's annotation; moreover, we only hold ourselves responsible for what appears in our own columns. Again, Mr. Bowlby takes exception to the statement that "a wound in the back is peculiarly likely to be self-inflicted if the suicide falls forward or on his side, while the arm still clutching the pistol is convulsively drawn, stiffened, and by the fall twisted back," and with veiled sarcasm *hints* that we were so purblind as to descant on a self-evident fact. It was not the *possible* self-infliction of a wound in the back, but the *likelihood* of such an act under certain conditions to which we intentionally and deliberately drew attention. Our information of what transpired at the inquest and trial was received through the usually accredited channels. At present we can only express our regret that Mr. Bowlby should feel injured by what he conceives a misrepresentation of his evidence as to fact and opinion. Our comments were made in the interests of justice, and in the belief that one reason why "neither the counsel for the defence nor the jury were able to solve the difficulty" was that they were not clear as to the possibilities, probabilities, and certainties of the case in its medical aspect.—ED. L.

CHARCOT'S DISEASE.

To the Editor of THE LANCET.

SIR,—The recent discussion at the Clinical Society has excited so much attention, especially with reference to the distinctive character of the affection, that the description of the following case may be of interest. E. C——, forty-two, single woman, was admitted to the wards of the Doncaster Infirmary, under the care of Dr. Sykes. She was an inpatient some years ago with extensive ulceration of the thighs, believed to be of a syphilitic character, and the cicatrices left bear out the supposition. She is a very stout woman, with a fixed rosy complexion and a peculiarly fatuous expression of countenance, constantly smiling in an idiotic manner. She speaks slowly and with a stutter, as if her tongue were too large for her mouth. She says that she has never had rheumatism, but gives a past history of sore-throat and skin eruption. Eight years ago her mother died, which broke up the home and caused her much anxiety, and she was obliged to go into the workhouse. Soon afterwards her hands began to feel numb, the sensation spreading up both arms, and her fingers and hands were swollen so that their use was much affected; her knees next began to swell, without pain, and her legs failed her. She had frequent attacks of giddiness, and could only perform her household duties with difficulty. Her memory became bad and she was subject to sudden failings of sight. Her skin is dry, and hangs in folds over the body. All over the back and also on the abdomen are little tumours, some pedunculated, others sessile, beneath the skin, of the fibroma molluscum type. The arms, particularly the right, are œdematous, and also the legs. Cutaneous sensibility is impaired all over the body. A needle can be plunged into the arms or hands at any point without causing pain. The hands have a clumsy "spade-like" appearance, the fingers curved backwards, and the phalangeal joints seem in a state of partial dislocation. There is no thickening of the articulation of the fingers, wrist, or elbow. She can give a grip of fair and equal power with both hands. There is some difficulty of movement of the left shoulder, and on rotation distinct crepitus is elicited from the joint. The knee-joints are irregularly swollen, no synovitis is apparent, the left larger than the right, and the extensor muscles of the thigh appear to be wasted. The general appearance of the joints is "knotty," like an old tree, and, as she lies in bed, as if there was a partial dislocation backwards and inwards of the leg on the thigh. There are several hard nodular enlargements round the joint, one or two being freely movable. The movements of the joint are quite free, almost more than naturally; no pain is caused by manipulation, nor is any crepitus to be detected. There does not appear to be any enlargement of the ends of the bones themselves. If the thigh be supported the leg swings freely. She is very slow in all her movements. She can walk by herself by taking great care, but if she shuts her eye she reels, and if she then moves forwards she falls. She complains of occasional shooting pains in the head, and also in the abdomen; the latter seem to be of a constrictive character, and occasionally very acute. The area of cardiac dulness is considerably increased on percussion, the heart-sounds are very feeble, but no bruit is audible; the pulse is slow and weak. The urine contains no albumen. The catamenia have always been regular but excessive. She is highly emotional, and laughs or cries on the slightest occasion. She has been treated with iodide of potassium, without any improvement to the general condition.

I have not had the opportunity of seeing any of Professor Charcot's cases, nor of having the benefit of the experience of those who have attended his clinique, but I imagine the above to be a similar condition to that to which the name of the distinguished Frenchman has been assigned. The syphilitic element is very plain in this case, although the condition of the joints does not resemble anything usually met with in that disease. The ataxic symptoms are very distinct, and there are several points in the case that bear a strong resemblance to the symptoms of myxœdema, of which I saw several cases in St. Thomas's Hospital, under Dr. Ord. The condition of the left shoulder-joint is just like an

ordinary case of rheumatoid arthritis. In several cases of myxœdema I noticed that the patients described their symptoms as following on some severe mental trouble, such as bereavement or reverse of fortune, of which this patient also made a point. I cannot see why we should go out of our way to make out nineteenth-century diseases. Darwin, Hutchinson, and men of that type, have simply put together facts that have been staring us in the face for generations, but for want of men of "collective investigation" nature, the gold was passed over by hundreds, before it was picked up by them.

I am, Sir, yours obediently,

J. G. MARSHALL, M.D. Cantab., M.R.C.S.,
Dec. 26th, 1884. House Surgeon, Doncaster Infirmary.

LUNACY REFORM.

To the Editor of THE LANCET.

SIR,—In the *résumé* in *The Times* of Saturday last of the supposed provisions of the New Lunacy Bill, there is one point that should not be allowed to pass without comment. I do not refer to the locum tenens' duties of the Deputy Commissioners, which are too impracticable to need contradiction; but to the barefaced suggestion to rob the medical profession of the two plums of the New Lunacy Board—viz., the posts of Chairman and Deputy Chairman. The new Commissioners, who must have served for years with the committees of asylums, must surely have had more experience of this particular kind than the well-connected but briefless barristers who are usually promoted to such posts.

The general education of the medical man is equal to that of the barrister, and the technical is certainly superior; while years of experience in the practical working of the Lunacy Laws must render a lunacy commissioner much better fitted for the post of chairman than a barrister totally unacquainted with the subject. It is the duty of alienists, as well as of the profession at large, to make every possible exertion to prevent an injustice, which at the same time is a slur and an insult to the profession.

I am, yours truly,

Hanwell, December, 1884. PSYCHOLOGIST.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE NEWCASTLE INFIRMARY.

I HAVE mentioned in previous letters that a movement was on foot for the extension of the Newcastle Infirmary by the erection of a new wing. I am happy to tell you that the proposition has fallen rather flat, as it was felt by many that the wants of the city and district could best be met by a new building in a more desirable situation than that at present occupied by the institution, which was open to many grave objections, and scarcely at all up to the requirements of modern sanitary science. Lately a meeting of the medical staff has been held, and the members were unanimous in recommending a new site and building in preference to any temporary or patchwork expedient. I believe also that the necessary funds will be found with greater facility now that a new building is likely to be determined upon.

"THE PHILADELPHIA CASE."

In a former letter I referred to this question as exciting a good deal of attention among the friendly societies of the North, and indeed outside them by the profession and the public. It is now settled, and in the following manner: both parties agreed to submit the matter to medical arbitration, and to abide by the decision. Drs. Clarke, Newton, and Hume—with Mr. Hardcastle, surgeon of this city—were appointed, and after a careful consideration they found that the miner's death took place from enteric fever, and was not accelerated by the accident for which it was sought to recover compensation. The case is instructive as showing how, in a matter involving purely medical points, arbitration might be more generally employed, saving immense legal costs, and indeed, I might say, the credit of our profession in the matter of cross evidence.

A WINDFALL FOR THE CARLISLE INFIRMARY.

The Carlisle Infirmary has received a cheque for nearly £2000, which must be regarded as unexpected, and in the light of a windfall. It took place in this way. More than a generation ago a lady died in Cumberland, who left the residue of her property to the infirmary. When the executors wound up her affairs it was found that there was only about £100 left, and an unknown sum to be probably paid to the Inland Revenue. As this was not claimed, it was invested in the funds. Years rolled by, during which executor after executor died, the matter being forgotten, and the sum increasing by way of compound interest to close on £2000. The Commissioners for the Reduction of the National Debt advertised the amount. This led to an inquiry, and representatives of the lady's executors were found, who claimed and received the money, and paid it over to the infirmary last week.

DEATHS OF NORTHERN PRACTITIONERS.

Dr. Valentine Hutchinson, a well-known surgeon in Bishop Auckland, died in that town last week, at the age of sixty-two. He had practised for about forty years, and had held various public offices. Dr. John Todd Macaulay also died in this city last week, at the early age of twenty-five. He was a member of a well-known and highly respected medical family here. His career thus cut short was one of much promise, as he was known to possess abilities in the profession above the average for one of his age and experience. He had likewise gained the good opinion of his medical brethren in this city, and he has died regretted by a great number of personal friends.

MUNIFICENT BEQUESTS BY A SOUTH SHIELDS GENTLEMAN.

Mr. R. Shortridge, a well-known county magistrate of Durham, died at his residence, Cleadon Meadows, South Shields, on the 11th of December. He has left over £8000 to various local and general charities, including the following amounts: Newcastle Infirmary, £2000; Ingham Infirmary, South Shields, £2000; South Shields Dispensary, £500; Deaf and Dumb Asylum, Newcastle, £500; Convalescent Home, Whitley, £500; and £1000 between the South Shields Sick and Indigent Asylum and the Blind Institution, Newcastle. Mr. Shortridge attained the great age of ninety-one years.

YELLOW FEVER IN A NEWCASTLE STEAMER.

The *Iolanthe*, of Newcastle, having arrived in Shields harbour last week from the West Coast of Africa, was boarded by the port sanitary officer, who found that six of her crew, including the boatswain, had died of yellow fever during the voyage; the mate was also attacked, but he recovered. Had this vessel arrived during the hot weather of the past season it might have caused much alarm, though at the present time the temperature on our north-east coast is such that yellow-fever could hardly exist.

THE COUNTY OF NORTHUMBERLAND AND FOOD ADULTERATION.

The reports of the public analyst for the past year have recently been published, and although the County of Northumberland as compared with other counties occupies a fairly favourable position, yet it is to be regretted that it shows an increase of nearly 8 per cent. in the number of adulterations found in articles submitted for analysis. The adulterations, however, would appear to be of the most innocent nature. The mixture used being not sand, alum, nor fetid fats, but water. In every case the adulteration was found either in milk or spirits; thus, in fifty-three samples of milk tested thirteen were found impure. In the case of a complex fluid like milk, however, we do not like to hear of any admixture of water, fearing that the adulterator may not be scrupulous as to the quality of the water he uses, but rather consider the quantity it will carry without risk of discovery.

Newcastle-on-Tyne, Dec. 31, 1884.

WOLVERHAMPTON AND STAFFORDSHIRE HOSPITAL.—On the 23rd ult. Mr. Vincent Jackson, honorary consulting surgeon at this institution, handed to the weekly board a cheque for £100, which he had received as subscriptions from a few ladies and gentlemen in the town towards the cost of a new building for the treatment of the surgical diseases of women.

IRELAND.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS.

AT a recent meeting of the Council, a motion proposed by Prof. Cameron, Vice-President of the College, to the effect that women should be admitted to all the examinations of this College, was adopted, the voting being 7 for and 4 against the resolution. The matter will, it is probable, come before the Fellows very shortly. No doubt there is a difference of opinion as to the desirability of admitting ladies to practise medicine and surgery, but, if women will be qualified, it is better that they should obtain their diplomas from an institution like the Royal College of Surgeons in Ireland than from some other licensing body where only a minimum of professional knowledge is expected.

PROPOSED ADDRESS AND TESTIMONIAL TO DR. DENHAM OF DUBLIN.

This esteemed member of the obstetric branch of the profession—a leading practitioner for many years in Dublin—having intimated his intention of retiring from practice, it has been resolved by numerous friends to present him with an address and testimonial, to show the respect and esteem in which he is held. Dr. Denham formerly held the responsible post of Master to the Rotundo Lying-in Hospital, and is an ex-President of the Royal College of Surgeons in Ireland. In consequence of failing health he some time since retired from the Council of his College, having been a member of it for many years. I am confident that the many friends of Dr. Denham will regard it as a duty and a pleasure in cordially co-operating to carry out the proposed address and testimonial.

ENNIS DISTRICT LUNATIC ASYLUM.

Dr. Daxon, late medical superintendent of this asylum, having retired in consequence of failing health, has been replaced by Dr. Richard Philips Gelston, who for the past fourteen years has occupied the post of assistant medical officer at Clonmel Asylum. The appointment is worth £400 per annum, with the usual emoluments, and an increase of £25 every third year until the salary reaches £500.

DUBLIN ORTHOPÆDIC HOSPITAL.

From the report which was adopted at the recent annual meeting in connexion with this institution, it appears that there are now thirty-one beds available, which the committee hope to increase to forty as soon as funds will permit. Several speakers referred to the advisability of amalgamation between the institution and the National Orthopædic and Children's Hospital, and the Lord Mayor, who presided, was requested to inform the Corporation that for the last four years they had been most anxious for a union. It has, however, recently been stated that the National Orthopædic Hospital is about to amalgamate with another Dublin institution.

ULSTER HOSPITAL FOR WOMEN AND CHILDREN.

This admirable institution having become involved in a debt of some £400, which impaired its efficiency, a bazaar was held recently in order to remove this liability. Since its foundation, more than ten years since, the hospital has been of considerable benefit, and it is to be hoped the bazaar in aid of its funds may have been as successful as its promoters can desire.

PARIS.

(From our Paris Correspondent.)

COCAINE.

THE medical press is full of cocaine just now; and most of the writers who have referred to it seem to speak of it as a new discovery, which they attribute to Dr. Koller. This is surely giving the young Vienna physician more credit than he ever claimed for himself, and all that can be accorded to him (and that is a great deal) is his being the first who applied cocaine to ophthalmic practice, for its anæsthetic properties had long been known. Other writers, in giving the history of coca and its derivatives, and of their therapeutical applications, have entirely ignored what had been done in France with these drugs. Dr. Charles Fauvel, the celebrated laryngologist of Paris, has, to my own knowledge, employed a concentrated extract of coca since 1869 at his clinique as a local anæsthetic in naso-pharyngo-laryngeal affections. In 1877 Dr. Scaglia, Dr. Fauvel's chef de clinique, published a report in the *Gazette des Hôpitaux*, in which the anæsthetic property of coca and its efficacy in painful affections of the throat was brought to the notice of the profession. In 1878 Dr. Coupard, another of Dr. Fauvel's chefs de clinique, published in the *Tribune Médicale* a report entitled "La Coca dans les Affections douloureuses du Pharynx et du Larynx," in which a strong alcoholic extract from the leaves of the coca is stated to have been employed for painting the throat. In 1880 Dr. Coupard, in conjunction with Dr. Bordereau, undertook a series of experiments with a hydrochlorate of cocaine, which was obtained from the plant under their immediate supervision, at which the local anæsthetic and mydriatic effects were clearly established; but, for some unaccountable reason, this discovery did not receive further attention, either in this country or elsewhere, until the announcement made by Dr. Koller at the Ophthalmological Congress held at Heidelberg in September last. The experiments of Dr. Coupard were repeated, and verified in 1882 by Dr. Laborde, the well-known experimental physiologist, who, in addition, proved that cocaine possessed general anæsthetic properties as well. To this day Dr. Fauvel employs a solution of coca for painting the throat in the various forms of painful angina, which he prefers to cocaine, as, however useful the latter may be in ocular or other therapeutics, he considers it inapplicable to affections of the throat, owing to its toxic properties. Moreover, cocaine is much more expensive and less manageable than coca, though Dr. Fauvel would admit that when the former is employed with caution it is far superior to coca for laryngoscopic examinations, for which he uses a 5 per cent. solution of the hydrochlorate of cocaine. This he much prefers to the old method of painting the pharynx with a saturated solution of the bromide of potassium, or to the German method of touching the vocal cords alternately with pure chloroform and a concentrated solution of morphine for twelve consecutive hours, in order to produce insensibility of the parts prior to operation. Besides the local employment of coca, Dr. Fauvel prescribes it as a general tonic and as a stimulant to the cerebro-spinal system in the form of infusion, pastilles, and wine; and he has observed that even when administered by the stomach, the tonic action of coca is so marked in cases of atony of the muscles of the larynx and relaxation of the vocal cords, that Dr. Fauvel has given it the name of "tenseur des cordes," and it has long been a popular remedy among singers, public speakers, &c.

DEATH OF M. J. B. GEORGE.

It is with regret I have to report the death of Mr. J. B. George, the well-known dentist of Paris, which took place on December 22nd, when he had just completed his fifty-eighth year. Mr. George had been practicising as a dentist for nearly forty years, during which time he acquired a great reputation as a skilful operator, and had one of the best practices among the *élite* of Parisian society. His son, who has just attained his majority, and has served his apprenticeship under his father, has succeeded to the practice, but being still rather young, he is ably seconded by Dr. Thomas, a renowned dentist of New York, who formerly worked with his father. Dr. Thomas had returned to New York, but on hearing of the serious illness of Mr. George he came back to Paris to give a helping hand to the son.

Paris, Dec. 30th.

MANCHESTER ROYAL INFIRMARY.—At a meeting of the Board of Management of this institution on the 29th ult., attention was called to the position taken up by the Health Committee of the Corporation in regard to payments for patients in Monsall Hospital. The Health Committee, believing that patients sent by them to the hospital are kept longer than is necessary, have refused to pay in full the accounts for the last two quarters. The deductions they make amount to about £500. The infirmary board, insisting that in such a matter they must be guided by their medical staff, passed a resolution expressing surprise at the action of the Health Committee, and calling upon them at once to pay what is due.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the examinations for Medical and Surgical Degrees held during Michaelmas term, the following candidates were approved:—

THIRD EXAMINATION FOR THE DEGREE OF M.B.

PART I.—Ds. Clarke, Caius; Griffith, Down.; Mag. Habershon, Trin.; Mag. Haviland, Joh.; Ds. Hillier, Caius; Ds. Musgrave, Magd.; Ds. Piggott, Emman.; Ds. Reid, Cav.; Ds. Ritchie, Trin.; Ds. Sherrington, Caius; Ds. Stericker, Clare; Turner; Weston, Caius.

PART II.—Ds. Emerson, Clare; Griffith, Down.; Mag. Habershon, Trin.; Ds. Knagge, Caius; Mag. Lyon, Emman.; Ds. Rutherfoord, Caius; Ds. Sherrington, Caius; Mag. Styan, Trin.; Ds. Trott, Caius; Turner; Ds. White-Cooper, Trin.

DEGREE OF B.S.

Ds. Piggott, Emmanuel; Shaw, Sidney; Mag. Street, Trinity; Ds. Ritchie, Trinity.

UNIVERSITY OF DUBLIN.—The following degrees were conferred at the winter commencements:—

BACHELOR IN SURGERY.—Baptist Gamble Frith, William Hallaran Francis John Harpur, G. Kiddle, Telford Smith.

BACHELOR IN MEDICINE.—Alexander James Boyd, John Blacker Buchanan, Thomas N. Flood, Baptist Gamble Frith, Richard Whately Gilmore, William Hallaran, G. Kiddle, Francis Joseph George King, William Richardson Rice, Rowland Hill Scovell, John James Watson.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the December examinations the following, having passed their final examinations for the Letters Testimonial, were admitted Licentiates of the College:—

Alfred B. T. Barcroft, Patrick J. Barry, Anthony L. Blake, Henry Breen, Edward Browne, Alban Butler, William J. Darby, Vesey Davoren, Ignatius P. Doyle, John Emerson, John Esmond, Henry J. Flanagan, William F. Fullam, Joseph W. Gallagher, John J. Gaynor, George E. Greene, James Halpin, Ernest Howe, Francis Knox Blake, John E. Lanegan, William H. Suggar, Anthony J. Luther, Joseph D. McFeely, John McGuinness, Herbert C. Mooney, John L. Moore, Bernard Murray, James Normile, Marshall P. O'Donovan, Paul A. Peile, James E. Riddle, Alfred J. S. Roe, John C. Sellers, Graves Stoker, Henry Stoker, Davis D. Tate, Robert C. Thacker, Richard H. Vereker.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 23rd ult.:—

Bates, George Tweedie, University College.
Caswell, George William, University College.
Fowler, Walter, Guy's Hospital.
Hildyard, Robert Loxham, King's College.
Jones-Humphreys, Yarry Meyrick, Guy's Hospital and Liverpool Royal Infirmary.
Leggatt, Gerard Stedman, St. Bartholomew's Hospital.
Lavies, Harry Brandreth, King's College.
Monk, Henry George Hawkins, King's College.
Selway, Leonard, Guy's Hospital.
Stedman, Frederick Osmund, Charing-cross Hospital.
Stubbs, Percy Bedford Travers, St. Bartholomew's Hospital.

The following gentlemen also on the same day passed the Primary Professional Examination:—

George Taylor Gifford, King's College; Samuel Edwin Lambert Smith, General Hospital, Birmingham.

DR. PALEY, of Peterborough, fractured one of his thighs on the 26th ult., through a fall in the hunting-field.

THE Queen has presented to the funds of the Booksellers' Provident Institution a donation of £20.

ST. ANDREWS UNIVERSITY.—The Chair of Chemistry, vacant by the retirement of Professor Heddle, has been filled by the appointment of Thomas Purdie, Ph.D., B.Sc. Lond.

VACCINATION GRANT.—Mr. R. L. Shone, M.R.C.S. and L.S.A., has received the Government grant for successful vaccination in the Mortlake district of the Richmond Union.

THE DEATH OF A GOODS GUARD.—An inquest was held at New Barnet on the 30th ult. on the body of Joseph Nichols, a guard, of Bingfield-street, Caledonian-road. The deceased was the only occupant of a third-class compartment in a train proceeding on Saturday from King's-cross to Peterborough, his duty being to work another train back. The train stopped at Hitchin, and Nichols was then missed. His body, fearfully mutilated, was found on Sunday morning in Barnet Tunnel. The supposition is that he fell out of the train and was run over. A verdict of accidental death was returned.

QUEEN CHARLOTTE'S HOSPITAL.—A petition has been addressed to Her Majesty in Council, praying that a charter of incorporation may be granted to Queen Charlotte's Lying-in Hospital. Having been referred to a Committee of the Lords of the Council, the petition will be taken into consideration on the 31st inst.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.—At the meeting to be held to-day (Saturday), at 6 o'clock, at 1, Adam-street, Adelphi, Mr. Edward C. Robins, F.S.A., will deliver an address on "The Growing Importance and Responsibility of Public Sanitary Inspectors explained, and their Relative Improvement in Education, Position, and Emoluments considered."

ON the 30th ult. an inquest was held at Chester on the body of Maria Burns, aged forty-three years. She attempted to light a paraffin lamp by thrusting the top into burning coals. The top came off, and her dress caught fire. Paralysed and unable to cry for assistance, she was found in a dreadful condition sitting down with her burning clothes about her. She died shortly afterwards. A verdict of accidental death was returned.

THE WORKING MEN'S CONVALESCENT HOME.—The first annual report of the Committee of Management of Morley House Convalescent Home at St. Margaret's Bay, near Dover, states that at the close of the financial year there was a balance after payment of all expenses of £63. A loan of £2000, obtained to effect the purchase of the freehold of the building and seven adjacent acres of land, however, still remains to be paid off. The subscriptions and donations during the past year amounted to £1610, and the payments by patients to £175.

THE RICHMOND WATER-SUPPLY.—After an expenditure of some thousands of pounds, the Richmond Select Vestry, upon the recommendation of the Water-supply Committee, have resolved to discontinue the deep boring of their well. In their report the committee state that it is not now clear to them that as the boring progresses there is a satisfactory increase in the yield of water; that the difficulty of boring and the consequent expense increase with every foot bored; that the opinion of Professor Judd, one of the highest authorities in the kingdom, only indicating a possibility but not a probability of finding water is not encouraging; and while the committee would gladly continue boring in the interests of science, they feel bound in the interests of the ratepayers not to continue unless there is a reasonable and well-supported prospect of ultimate success. At the last ordinary meeting of the Vestry, the chairman (Major Bull) stated that it might be possible that some learned society or the Government might be induced to grant money to continue the boring operations at the well in the interests of science. It had attracted a vast amount of attention in this country and on the Continent and throughout the world, but more particularly among French scientists, who had discussed it at their meetings. The present depth of boring is 1439 feet.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ACKERY, JOHN, M.R.C.S., L.D.S., has been appointed Assistant Dental Surgeon to St. Bartholomew's Hospital.

ADDENBROOKE, E. H., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the District of Kidderminster.

ALLEN, Mr. ALFRED HENRY, has been reappointed Public Analyst for the Borough of Wakefield.

BEATTIE, HENRY, L.R.C.P.I., M.R.C.S., has been appointed Medical Officer for the South District of St. George's in the East, vice Pritchard, deceased.

BUCHANAN, JOHN, M.B. & C.M.Glas., has been appointed Junior House-Surgeon to the Royal Albert Edward Infirmary, Wigan, Lancashire, vice A. B. Liptrot, resigned.

BUCKBY, ROBERT GREVILLE, L.R.C.P.Ed., L.R.S.I., has been appointed Medical Officer for the Bulwell District of the Basford Union.

BUSH, J. PAUL, M.R.C.S., has been appointed Surgeon to the Bristol Police Force, vice F. R. Cross, M.B., F.R.C.S., resigned.

COLLINS, WILLIAM JOB, M.D., B.S., B.Sc.Lond., F.R.C.S.Eng., has been appointed Ophthalmic Surgeon to the North-West London Hospital.

DACRE, JOHN, L.R.C.P.Lond., M.R.C.S., has been appointed House Physician to the Bristol Royal Infirmary, vice J. Fenton Evans M.B., promoted.

ELLIOTT, W. T., L.D.S.Ed. & Dub., F.C.S., has been appointed Assistant Dental Surgeon to the Birmingham Dental Hospital.

EVANS, J. FENTON, M.B., C.M., has been appointed House-Surgeon and Senior Resident Medical Officer to the Bristol Royal Infirmary, vice J. Paul Bush, resigned.

EVANS, T. ANEURIN, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for the Flint Urban Sanitary District, vice Jones, deceased.

FLETCHER, WILFRED W. E., M.B.Cantab., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Ormskirk Rural Sanitary District, vice the Poor-law District Medical Officers, whose appointments have expired.

HAWKINS, ALEXANDER F., L.R.C.P.Lond., M.R.C.S., has been elected Honorary Obstetric Officer to the Queen's Hospital, Birmingham.

HAWKINS, C. F., M.R.C.S., L.S.A.Lond., has been appointed Public Vaccinator for the District of Clifton, Bristol, vice L. Matthews Griffiths, M.R.C.S., resigned.

HAWKINS, FRANCIS H., M.B., C.M., has been appointed House-Surgeon to the Victoria Hospital for Sick Children, Queen's-road, Chelsea, S.W.

HUTCHINSON, JONATHAN, jun., M.R.C.S., has been appointed Surgical Registrar to the London Hospital.

JAQUET, J. LEWIS, M.D., has been appointed Attending Medical Officer to the South London Medical Aid Institute, vice E. O. Day, resigned.

LATCHMORE, Mr. EDWARD, has been appointed Demonstrator to the Dental Hospital of London.

LIPTROT, A. BAILEY, M.R.C.S., L.R.C.P.Ed., has been appointed House-Surgeon to the Liverpool Eye and Ear Infirmary.

MACKRELL, ALFRED S., M.R.C.S., L.R.C.P.Ed., has been appointed Assistant Dental Surgeon to St. Bartholomew's Hospital.

MUMFORD, WILLIAM ELLIS, L.R.C.P.Ed., L.R.C.S.Ed., has been re-appointed Medical Officer of Health for the Pudsey Urban Sanitary District.

POLAND, JOHN, F.R.C.S.Eng., has been appointed Surgeon to the Miller Memorial Hospital, Greenwich, S.E.

POTTER, HARRY, M.R.C.S., has been appointed Medical Officer for the Ilkeston District of the Basford Union.

POWELL, A. WORSLEY, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant Colonial Surgeon and Medical Officer to the Mount Gambier Hospital, South Australia.

SHAW, JOHN A., M.R.C.S., L.S.A.Lond., has been reappointed Registrar to the Victoria Hospital for Children, S.W.

THURSTON, HUGH C., M.R.C.S., L.R.C.P.Lond., has been appointed Assistant Resident Medical Officer and Pathologist to the Bristol Royal Infirmary, vice J. Dacre, promoted.

TUXFORD, HAROLD A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Second District of the Eastbourne Union, vice Billing.

WHITELEGGE, BENJ. ARTHUR, M.D.L., M.R.C.S., S.S.Cert.Camb., has been appointed Medical Officer of Health for the Nottingham Urban Sanitary District, vice Seaton, resigned.

Births, Marriages, and Deaths.

BIRTHS.

DAY.—On the 4th ult., at Dundas Villa, Redcar, Yorkshire, the wife of William A. Day, M.R.C.S., of a daughter.

DOCKRELL.—On the 27th ult., at Oldfield House, New Cross, S.E., the wife of Morgan Dockrell, B.A., M.B.Dub., of a daughter.

EAGER.—On the 29th ult., at The Limes, Woking, the wife of T. Cawley Eager, M.D., of a daughter.

HAYES.—On the 22nd ult., at Clarges-street, Mayfair, the wife of Thomas Crawford Hayes, M.D., of a daughter.

PEDLEY.—On the 18th ult., at British Burmah, the wife of T. Franklin Pedley, M.D., Health Officer, Rangoon, of a daughter.

PENNY.—On the 27th ult., at Pinxton, Derbyshire, the wife of Edward Penny, M.D., of a son.

STOCKER.—On the 20th ult., at Weston House, Richmond-gardens, Forest-gate, the wife of Chas. J. Stocker, L.R.C.P.L., of a daughter.

WATKINS.—On Nov. 14th, at Boshof, Orange Free State, South Africa, the wife of Harold Fuller Watkins, M.B. C.M.Ed., of a daughter.

WELLS.—On the 29th ult., at College-crescent, Belsize-park, N.W., the wife of Chas. Wells, M.D., M.R.C.S., &c., of a son.

MARRIAGES.

ARTHUR—GILMOUR.—On the 23rd ult., at the Alexandra Hotel, Glasgow, Hugh Arthur, M.D., Airdrie, to Elizabeth Gilmour, only daughter of James Manuel, Esq., Muirhead, Shotts.

ASHWORTH — SMYTHE. — On the 23rd ult., at the Parish Church, Hunstanton, J. Henry Ashworth, F.F.P.S. Glas. and M.R.C.P. Ed., of Halstead, Essex, to Kate, younger daughter of the late Henry Smythe, M.D., of King's Lynn.

BUXTON—CLARKE.—On the 18th ult., at All Saints', Oldham, Hants, Dudley Wilmot Buxton, M.D., M.R.C.P., son of the late Harry Wilmot Buxton, Esq., Barrister-at-law, to Louisa Frances Agnes Clarke.

DEATHS.

DODD.—On the 28th ult., at 10, Carlisle Parade, Hastings, Mary, the wife of A. Russell Dodd, M.R.C.S., L.R.C.P.Lond., of 24, Montagu-street, Portman-square, W.

LEIGH.—On the 20th ult., at Llanfabon, John Leigh, J.P., F.R.C.S., aged 65.

VAUGHAN.—On the 17th ult., at his residence, Llanvair House, Builth, James Vaughan, late Surgeon-Major Bombay Army, in his 57th year.

WRIGHT.—On the 28th ult., after a short illness, John Freeman Wright, M.R.C.S., of Meridian-road, Clifton, and late of Seymour-street, London, aged 66.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, January 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. each day, and at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. T. Lauder Brunton: Digestive Disorders, their consequences and Treatment (Lettsomian Lecture).

Tuesday, January 6.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M., and on Fridays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Tyndall: The Sources of Electricity.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.—4 P.M. Quarterly General Meeting.—Mr. Lennox Browne: Inebriety as affecting the Vocal and Respiratory Organs.—Communication from Dr. Joseph Parrish, President of the American Association for the Cure of Inebriety.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Lane: Fracture of the First Rib alone, and its Causation.—Mr. Godlee: Extensive Fracture of the Skull in an Infant, with Effusion of Serous Fluid.—Mr. Pepper: A Case of Malignant Disease of the Spermatic Cord.—Dr. Norman Moore: (1) Congenital Disease of Heart; (2) Hæmorrhage into the Substance of the Liver (card).—Mr. Lockwood: Rudimentary Abdominal Ribs (card).—Dr. Silcock: Tubercular Disease of the Epididymis (card).—Dr. Charlewood Turner: (1) Congenital Stenosis of Œsophagus; (2) Aneurysm of the Aorta opening into the Œsophagus (card); (3) Aneurysm of Sinus of Valsalva, with Abnormal Coronary Arteries.—Dr. Herringham: Two Specimens of Calcareous Change in the Spinal Membrane (card).—Mr. Poland: Synostosis of Foot (card).—9.30 P.M. Election of Officers and Council.

Wednesday, January 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour. Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, January 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Tyndall: The Sources of Electricity.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Living and Card Specimens. 8.30 P.M. Mr. F. R. Cross: (1) Case of Congenital Irideremia; (2) Cystic Tumour of Iris; (3) Cholesterine Crystals in the Vitreous.—Mr. E. Nettleship: Total Detachment of Retina of long Standing, with Retention of some Sight.—Mr. W. A. Brailey: Irido-cyclitis, with Hyphæma and enormously deep anterior chamber (sequel of case shown at the last meeting).—Mr. G. Hartridge: Opaque Nerve Fibres.—Mr. W. H. Jessop: Tubercle Bacilli in Blood Serum (cultivated), and in Iris of Rabbit (after inoculation).—Ophthalmoscopes will be exhibited by Messrs. Couper, Gunn, Morton, G. L. Johnson, and others—Mr. W. H. Jessop: On the Cocainised Eye; Discussion on the Action of Cocaine (adjourned from last meeting).—Mr. W. A. Brailey: On the Condition of the Ciliary Nerves in various Eye Diseases, with microscopical specimens.—Mr. J. Couper: An Improved Ophthalmoscope.—Mr. A. S. Morton: An Improved Students' Ophthalmoscope.—Report of the Committee on the Influence of the Vapours of Bisulphide of Carbon and of Chloride of Sulphur on the Vision and General Health.

Friday, January 9.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting for the Election of Officers and Council.—Dr. Hale White: Case illustrating Lesions of the Frontal Lobe, with very few symptoms.—Dr. Pringle: A Case of Recurrent Hæmatemesis, with Urticaria.—Mr. B. Roth: A Case of Hydrocephalus in a Boy aged Sixteen, who has never walked (living specimen).

Saturday, January 10.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, January 1st, 1885.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. in Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Dec. 26	30·12	N.E.	37	35	...	37	35	...	Overcast
,, 27	30·06	N.E.	37	35	...	38	33	...	Overcast
,, 28	30·10	E.	37	36	...	39	34	...	Overcast
,, 29	29·84	E.	37	36	...	39	35	...	Overcast
,, 30	29·90	E.	36	34	...	36	34	...	Overcast
,, 31	30·16	E.	34	33	...	43	32	...	Foggy
Jan. 1	30·29	S.E.	31	...	...	34	30	...	Bright

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

OVARIOTOMY.

AT a recent meeting of the Surgical Section of the Academy of Medicine in Ireland, a paper on Ovariotomy, by Mr. William Thomson, was the subject of considerable discussion. There were two points principally under consideration—namely, the question of drainage, and of specialism as regarded the operation. It was generally conceded that hospital surgeons accustomed to emergencies of all kinds were perfectly competent to perform ovariotomy, as compared with obstetric surgeons, and that there was no valid reason why the latter should have a monopoly of the operation in question. Drainage-tubes, it was believed, might usually be dispensed with, although occasions arose when their use might be of advantage. Dr. Lombe Atthill, ex-Master of the Rotunda Lying-in Hospital, who has had the most extensive experience of ovariotomy of any surgeon in Ireland, was of the opinion that there was a better chance of recovery when the operation was undertaken in the early stages of ovarian disease.

Z. Y. X.—We do not know of any society of the kind mentioned. The instruments are very inexpensive.

"A NEW FORM OF DILATOR FOR STRICTURE OF THE URETHRA."

To the Editor of THE LANCET.

SIR,—The dilator which Mr. Walsham describes in your issue of Dec. 20th is identical in principle and construction with one made for me by Messrs. Meyer and Meltzer, and which was the result of months of careful and costly experiments. It was exhibited at the Obstetrical Society of London on June 4th, 1884; and I stated that although it had been invented for dilating the uterus, it might be used for the urethra. I have not found it necessary to carry the indiarubber sheath over the whole instrument, but I stated at the meeting that this might be done if thought necessary. The credit of inventing this excellent dilator is more due to Mr. Meyer than myself; and, I am sure, Mr. Walsham would not wish to deprive him of any meed or material advantage which has been so laboriously earned.—Yours faithfully,

Upper Wimpole-street, W., Dec. 24th, 1884. JAMES H. AVELING.

Mr. Geo. Pudley.—The insertion of the note would probably give rise to a controversy for which at present we have not space.

Novice.—1. Yes, price 2s. each.—2. No.—3. No instructions would be necessary.

THE CASSAN FUND.

To the Editor of THE LANCET.

SIR,—Will you allow me to acknowledge through your columns the following additional donations received towards this fund:—The Lincoln Medical Society, £10; Dr. O'Connor, Gainsborough, £1 1s.

I am, Sir, yours faithfully,

H. P. LANCASTER, M.D.

275, Lewisham High-road, S.E., Dec. 31st, 1884.

THE EXCELSIOR GYMNASIUM.

Dr. J. Sawyer and others.—The address of the inventors of the above-named ingenious apparatus was inadvertently omitted from the description we gave of it last week. It is as follows:—Messrs. Chadborn and Caldwell, New York, and 223, Upper Thames-street, London.

Opium.—There is as yet no such establishment in England, nor have we heard of any in Germany. The demand for an institution of the kind is not, we trust, sufficient to render it necessary.

THE P. AND O. COMPANY'S MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I beg to forward for your perusal an exact copy of a circular recently issued by the P. and O. Steam Navigation Company in reference to the conduct of the surgeons of their steamers.

The first paragraph—viz., prohibiting surgeons from claiming fees from sick passengers—I have nothing to find fault with. We are paid a fixed salary by the Company for our services, which are supposed to include professional attendance on all sick people on board, whether crew or passengers.

The second paragraph, however, states: "A passenger is not only entitled to medical attendance and medicines whilst he is on board, but he is entitled to ask for and to obtain a copy of the prescription for any medicine which the surgeon has administered to him." In other words, a passenger is not only entitled to medical attendance while on board ship, but can, by means of a prescription compulsorily exacted, render himself independent of further advice when he goes on shore.

The third paragraph is far more arbitrary. I had hitherto believed that medicines were supplied by the Company to their ships for the exclusive use of the surgeons in the treatment of patients under their charge, but it would appear that we are expected to perform in addition the rôle of pharmaceutical chemist, and blindly dispense a prescription for any passenger without having previously ascertained that it be suitable to the present state of the patient, except only that we are considerately told in an added clause that "the surgeon would not be justified in administering in these circumstances an unusual dose, or in making up a prescription to a patient who was very ill, without in the first instance satisfying himself that the medicine was suitable to the circumstances of the case." Or, in plain language, we are seriously informed that we are not justified in following out their instructions so literally as to run the risk of poisoning a patient, and that in cases of serious illness we are allowed to satisfy ourselves of the suitability of the medicine to the circumstances of the case.

It would surely be no great hardship for those who desired to continue a certain course of treatment to bring with them a supply of medicine sufficient for their use during the voyage, or, failing this, they might easily procure the same at one of the numerous ports touched at by the Company's mail steamers, in all of which are chemists well qualified to dispense English prescriptions.

The responsibility for this circular, however, does not rest entirely with the managing directors of the Company, as they possess the services of a medical inspector, who is in attendance weekly at the head office of the Company in London, and without whose knowledge and approval no such document would have been issued.

I am, Sir, yours truly,

A P. AND O. SURGEON.

"No. 140." "MEDICAL FEES."

"Peninsular and Oriental Steam Navigation Company's Offices,
122, Leadenhall-street, London, E.C., 1st Nov., 1884.

"*To the Commander of the SS.* '

"Dear Sir,—Complaints have recently been made by passengers that surgeons of the Company's ships have applied to them for fees, and we have found to our great regret that these complaints have been to a large extent justified. As the surgeons against whom the complaints were laid alleged special circumstances in the respective cases, we have now to intimate that under no circumstances whatever is a surgeon allowed to ask for a fee.

"A passenger is not only entitled to medical attendance and medicines whilst he is on board, but he is entitled to ask for and to obtain a copy of the prescription for any medicine which the surgeon has administered to him.

"It does and must happen that passengers in delicate health, or subject to occasional attacks of illness, will desire to obtain medicines which have been prescribed for them by previous medical advisers. It is our wish that every facility should be given by the surgeon to gratify this natural desire, and surgeons are requested to dispense any prescription which a passenger may ask them to make up if they have the medicines required, so long as the prescription does not direct the employment of any powerful medicine in an unusual dose, and the passenger is not seriously ill.

"The surgeon would not be justified in administering in these circumstances an unusual dose, or in making up a prescription to a patient who was very ill, without in the first instance satisfying himself that the medicine was suitable to the circumstances of the case.

"We have pleasure in testifying that complaints of the kind referred to have been made against only a small minority of the surgeons, and we are satisfied that as a rule the surgeons of the fleet are gentlemen whose habits of tact and forbearance are sufficient to ensure in all cases a feeling of cordiality between themselves and their patients; and this is an additional reason why we shall feel it incumbent on us to deal severely with surgeons who, under the influence of short-sighted motives, come unpleasantly into collision with the passengers of whom they have charge. You will be good enough to obtain the signature of the surgeon of your ship to this circular, as evidence that he has read and noted its contents, and you will adopt the same course when a fresh surgeon joins, in order that none may plead ignorance of our wishes.

"We are, Dear Sir, yours faithfully,

"THOS. SUTHERLAND (for the Managing Directors.)"

WEEKLY DINNERS FOR POOR CHILDREN.

THE London Cottage Mission have issued an appeal, announcing that they have commenced their Irish stew dinners to the poor children in the East of London, but that the funds of the Mission being so low, and there being so many pressing liabilities to meet in connexion with the Summer Home and general mission works, the dinners must cease unless special contributions are obtained. Whatever differences of opinion may be held as to the relative merits of penny dinners, half-penny dinners, and free dinners, of their absolute utility there can be none. The movement is a good one, and deserves extensive support. Subscriptions and donations will be thankfully received and acknowledged by Miss F. Napton, the Lady Superintendent, 304, Burdett-road, Limehouse, E.; the London and South-Western Bank, 7, Fenchurch-street, E.C.; and by Walter Austin, Managing Director, 44, Finsbury-pavement, E.C.

Medicus.—1. Our correspondent cannot practise legally on this diploma.—2. He is not likely to be convicted for using the title attaching to his degree, if obtained after a *bona fide* examination.—3. He cannot obtain an English licence without an examination.

M.R.C.S.Eng.—No. The case is a hard one; but such is the law. The examination covered all branches of practice—surgery, medicine, and midwifery; but the diploma is a qualification only in surgery.

ELECTION TO HOSPITAL APPOINTMENTS.

To the Editor of THE LANCET.

SIR,—On behalf of the large number of applicants which there is at the present time for any resident hospital appointment, I would ask leave to draw your attention to the fact that the authorities of some hospitals seem quite regardless of the expense to which they put the candidates for such posts. Let me tell how matters are managed when the committee of a large and well known hospital in the Midlands advertises a vacant appointment. Each candidate is supplied with a list of the members of the committee, some forty or fifty in number. To each of these he must send a copy of testimonials. He further learns with dismay that he is expected (of course, it is optional, but a man stands a poor chance of success who neglects it) to interview severally and individually the men whose names appear on this list. The anxious candidate then sets out on his travels, starting perhaps from London, Edinburgh, or Dublin, and spends several days in seeing the members of the committee, on some of whom he calls three, four, or even more times before he obtains an audience. He is in a few instances received with attention, and interest is shown in the election. In some cases he is treated with curtness little short of rudeness. He usually finds that little interest is manifested in the affair by those whom he has come perhaps hundreds of miles to see. They say (and rightly, too) that "they leave these things in the hands of the visiting staff." His canvass ended, the candidate returns home, only to make another journey a few days later to appear at the election. Here the candidates are told that as their presence, though perhaps deemed advisable, was not actually requested, no travelling expenses can be allowed. The successful candidate may think lightly of the pounds he has expended in obtaining his appointment—no small percentage, possibly, of his next year's salary—but the rejected men look regretfully at the total of their travelling and hotel expenses for the last few weeks, and think hard things of those who instituted so wasteful a system of candidature.

I could give other instances of men called from a distance to interview committees, sometimes twice in connexion with the same appointment, when "no expenses were allowed." I have, moreover, noticed that in those cases where travelling expenses of selected candidates are allowed only three or four are usually selected for a personal interview with the electing committee, but that where these expenses are borne by the candidates the committee is by no means niggardly in the number of men selected or the number of times their presence is requested. Thus, much more money is spent by the candidates in an election of this sort than it would have been necessary for the hospital committee to expend on a properly conducted election.

Now, there are two sides to a bargain, and the hospital is as much a gainer by the election as the person elected, and certainly derives greater advantages from it than the unsuccessful candidates who are made to pay by far the greater part of the expenses connected with it.

I should be glad, Sir, if you would through the columns of your journal advocate the payment of travelling expenses to selected candidates for such appointments as I have mentioned, and discountenance canvassing in any form as being either unfair or useless.

I am, Sir, yours obediently,

December 31st, 1884. AN UNSUCCESSFUL CANDIDATE.

ARMY PROMOTION.

WE observe that our contemporary the *Army and Navy Gazette* is anxious that we should inform him "by whose hand" a verbal correction was made in the questions for promotion of surgeons-major which were published in THE LANCET. We cannot gratify his curiosity, as we printed them exactly as we received them, through the courtesy of the Director-General, in reply to an application which we made for a copy, as we considered they would be interesting to many of our readers.

POISONOUS CONFECTIONERY.

AT a recent meeting of the New York Health Board, Dr. Cyrus Bilisoa presented his report upon the adulteration of candies. The factories and goods of sixty-four firms engaged in the manufacture of sugar confectionery in New York were inspected. Thirteen of these firms were found to be using chrome yellow (chromate of lead) for imparting a yellow colour to their candies. Five of the thirteen were using chrome green (chromate of lead and ferrocyanide of iron), red lead (red oxide of lead), vermilion (bisulphuret of mercury), and Prussian blue (ferrocyanide of iron). Three were using burnt umber, for imparting a chocolate colour; one was using fuschine (an aniline contaminated with arsenic), for imparting a red colour. The sugar confectionery coloured with poisonous pigments in the possession of manufacturers was seized and destroyed.

Enquirer.—Absolute perfection in any human work is not to be expected. The query propounded in the last part of our correspondent's letter must be answered in the affirmative.

Idem.—There is no invariable rule. It is right to ascertain the custom of the place, and to act accordingly.

Mr. F. N. Williams.—The question is too vague, but appears to be one that ought to be put to a solicitor.

A Constant Reader.—40, Margaret-street, Cavendish-square, W.

"UNSOUND MEAT."

To the Editor of THE LANCET.

SIR,—In your issue of the 20th ult., Dr. Henry E. Armstrong says that the medical officer of health, and not the veterinary surgeon, is the proper authority on the fitness of flesh for the food of man. He also asserts that the diagnosis of the veterinary surgeon as an expert on the diseases of quadrupeds should be accepted by a medical officer as a basis on which to arrive at a proper conclusion, but nothing more. In due deference to Dr. Armstrong I beg to assert that a veterinary surgeon and not a medical officer is the proper authority as to the fitness of flesh for human food. Surely, if a veterinary surgeon is to be called in as an expert to inform the medical officer as to the disease the animal has been suffering from, he (the veterinary surgeon) must be the fit and proper person to form a correct opinion as to whether the flesh is fit for food or not. In support of my views, I maintain that medical officers know little or nothing about the diseases and post-mortem appearances of quadrupeds, or why call in a veterinary surgeon to assist them, to arrive at a proper conclusion? Perhaps Dr. Armstrong has not forgotten the very serious outbreak of anthrax in cows, which occurred in this city a few years ago? If he had then been conversant with the post-mortem appearances of that fatal disease, he would never have made the serious mistake he then did of passing the flesh as fit for food; that anyone knowing the disease from which they suffered would never dream of doing; at least no veterinary surgeon would. It will be interesting to the curious to know that it was not until a veterinary surgeon pointed out to him his serious mistake that he fully realised the situation. And I have no doubt the curious will be still more interested to know how hastily he retreated to secure, if possible, those portions of flesh not disposed of as unfit for food. For Dr. Armstrong's benefit, I beg to say that the flesh of cows, if killed in the earlier stages of parturient apoplexy, is fit for food. And, in my humble opinion, it is a great sin that such flesh should be destroyed as unfit for food, as it often is by the medical officer. I have more than once brought joints home for the use of my family that had been condemned. In conclusion, I beg to ask Dr. Armstrong or any member of the medical profession in which part of their curriculum are they taught the diseases and post-mortem appearances of disease in quadrupeds. And how often do they attend slaughter-houses to inspect carcasses in health and disease.

I am, Sir, yours obediently,

Newcastle-on-Tyne, Dec. 27th, 1884. GEORGE ELPHICK.

To the Editor of THE LANCET.

SIR,—If one more argument were required to prove that meat inspection should be in the hands of the veterinary surgeon, Dr. Henry Armstrong has supplied it in his letter on the subject in your issue of Dec. 20th. He says: "The diagnosis of disease made by a veterinary surgeon as an expert on the diseases of quadrupeds should be accepted by the surgeon as the basis on which to arrive at a conclusion, but nothing more." This is exactly the system of meat inspection carried out in this city. Dr. H. Armstrong is the meat inspector, and he calls in the veterinary surgeon to tell him what the animal died from, or what disease it was suffering from when slaughtered. I have often been consulted by Dr. H. Armstrong, and have examined many carcases for him, and I have no doubt that he will admit that he has gained a great deal of his knowledge respecting meat inspection from members of the veterinary profession; and yet, strange to say, although he depends largely upon veterinary surgeons for information, he denies their ability to act as meat inspectors. Surely, the man who has made the diseases of animals a special study, who is familiar with their cause, nature, symptoms, and post-mortem appearances, must be a better safeguard to the public against the use of diseased meat and the destruction of wholesome food than the surgeon who, without the aid of a veterinary surgeon, cannot even say from what disease the animal had suffered from during life.

I am, Sir, yours truly,

Newcastle-upon-Tyne, Dec. 23rd, 1884. CLEMENT STEPHENSON.

RUSSIAN HOSPITALS.

AT a recent meeting of the St. Petersburg Health Committee, Professor Borking, speaking of the large death-rate in the hospitals of that city said that he had come to the conclusion that the patients died mostly from weakness; for with their daily allowance of thirteen or fourteen copecks, they cannot even buy a pound of beef for broth. In addition to this, the nurses, who are very badly paid, are reported to steal the food of the patients whenever they can. Surprise is also sometimes expressed in St. Petersburg society at the rapid growth of wealth among hospital authorities.

F.S.A.—Our correspondent admits that a dual service as existing of old is an impossibility, and the division desired by him into a military and civil branch we hold to be also an impossibility. One reason for keeping the civil appointments for the I.M.O. was to have a reserve available if and when required for military service, such as the Afghan Campaign, &c. But for this, Government would very likely appoint native civilians at much lower rates of pay. The possession of a reserve body of M.O. for military service when required is the justification for keeping up high-paid civil appointments.

Prof. G. Rumme.—We cannot extend our exchange list.

UMBILICAL TUMOUR.

To the Editor of THE LANCET.

SIR,—Mr. Wyatt Pratt's case published in your last issue is worthy of record. But may I be allowed to suggest that a deviation from the old stereotyped rule of ligaturing the cord three or four inches from the umbilicus might in this case have been advantageously practised, and the ligature in the first instance placed round the pedicle of the umbilical tumour, thus saving risk of delay and suffering to the little patient.

I am, Sir, yours truly,

Portland, Dec. 29th, 1884. VACY ASH, M.B.

TREATMENT OF CHARBON.

A Neapolitan Surgeon desires to obtain the opinion of English surgeons on the value in the treatment of charbon (either in men or animals) of diluted carbolic acid or iodine used subcutaneously.

Assistant had better consult a medical agent.

Mr. Chas. Kirk.—There is no practical distinction.

WANTED MORE STREET ORDERLIES.

To the Editor of THE LANCET.

SIR,—When so much is done for he public health, it is to be regretted that there are not more boys employed to sweep up the horse droppings. I notice in many districts that there are no boys, or not enough, so that much of the refuse is left to be trodden about, and contaminate the atmosphere.

I am, Sir, your obedient servant,

Blackheath, Dec. 22nd, 1884. C. H. BIERSTED.

Non de Plume had better communicate with the Dean of the Faculty, Dr. Béclard, à l'Ecole de Médecine, Paris.

A Medical Student.—The principal rightly claims the fee.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. H. C. Pope, London; Mr. A. E. Barker, London; Dr. Czartoryski, Stockton, Calfornia; Mr. Carmalt Jones, London; Dr. Broadbent, London; Dr. Moxon, London; Mr. V. Ash, Portland; Mr. St. George Mivart, London; Mr. H. W. Smith; Mr. Gaussen, Lechlade; Mr. S. Smith, Bristol; Mr. G. Padley, Swansea; Mr. E. Gurney, London; Mr. F. Treves, London; Prof. Rutherford, Edinburgh; Messrs. Carswell and Co., Edinburgh; Mr. Sturrock, London; Dr. Herschell, London; Mr. Elphick, Newcastle-on-Tyne; Mr. W. Rivington, London; Dr. G. Buchanan, Glasgow; Dr. Ward Cousins, Southsea; Mr. R. Jeffreys, Chesterfield; Mr. C. S. Loch, London; Mr. Jalland, York; Mr. H. B. Runnalls, Saltash; Mr. H. E. Armstrong, Newcastle-on-Tyne; Mr. J. Hannay, Hinton; Mr. A. Neve, Kashmir; Dr. Roberts, Monrovia; Dr. J. H. Aveling; Mr. C. Stephenson; Mr. T. B. Vernon, Warrington; Mr. J. C. Voigt, Bury; Mr. Snell, Sheffield; Mr. S. C. Less, London; Dr. Sturges, London; Dr. Braithwaite, Leeds; Dr. Finlayson, Glasgow; Dr. Fenwick, London; Dr. Sydney Ringer, London; Dr. Buxton, London; Mr. Durham, London; Mr. Otto Pohl, Liverpool; Brigade-Surgeon MacDowall, Bombay; Dr. Alder Smith, London; Dr. Lancaster; Mr. Bowlby, London; Mr. H. C. Burdett, London; Mr. Henry, London; Mr. Hains, Totnes; Mr. J. B. Marshall, Doncaster; Dr. Brailey, London; Mr. Stanford, London; Mr. Ling, Saxmundham; Messrs. Christy and Co., London; Mr. Cornish, Manchester; Mr. Kinder, Leicester; Mr. Fox; Mr. Flint, Westgate-on-Sea; Mr. Griffiths, Bristol; Dr. Squire, London; Mr. Townsend, Exeter; Mrs. Norris, Weston-super-Mare; Mr. Pilley, Villapuram; Mr. Webb, Bury; Mr. Cooke; Mr. R. F. Woodcock, Wigan; Dr. Jay, Slough; Mr. Parker, Liverpool; Mrs. Tillett, Cheltenham; Surgeon-Major O'Brien, Cork; Messrs. Maclehose and Son, Glasgow; Dr. W. Smith, London; Mr. G. Lawson; Mr. Douglas, Perth; Mr. Whitford, London; Mr. Heven; Mr. Loman; Dr. Heywood Smith, London; Mr. Johnston, Sheffield; Mr. Hollinsworth, London; Mr. Meyer, Glasgow; Mr. Galt, Glasgow; Mr. Barnes; Mr. Elliott, Carlisle; Messrs. Wood and Co., New York; Miss Middleton, Loughborough; Mr. Young, Westminster; Dr. Dean, Exeter; Mr. Antoine, St. Angelo; Mr. Crosse, Norwich; M. Berthier, Paris; Dr. Waters, East Grinstead; Mrs. Muscroft; Mr. Holloway; Mr. Hutchinson, Newmarket; Mr. Marshall; Dr. Kerr, Regent's-park; Messrs. Lee and Martin, Liverpool; Mr. Dickson; Mr. Hulme, Birmingham; Dr. Davies, Wrexham; Mrs. Pratt, Cardiff; Mr. Askey, London; Messrs. Sampson Low and Co., London; Mr. Kirk, London; Dr. Jos. Rogers, London; Mr. Marks, London; Dr. David Taylor, Paisley; Mr. Stuart, Dundee; Dr. Maunsell, Bath; Dr. Mitchell Banks, Liverpool; Mr. Westgarth; Assistant; Non de Plume; Medicus; Opium; M. M. M.; Idem; F.S.A.; An Unsuccessful Candidate; I. M. S.; M.R.C.S.; Verax; X. Y. Z.; Psychologist; A Subscriber.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Bell; Mr. White, Bayswater; Mr. Austen, Faversham; Mr. Clarke, Whitchurch; Mr. Day, Stalmine; Mr. W. Adams, London; Dr. Lumpkin, Lagos; Mr. Stonham, London; Mr. Rodwell; Mr. Snell, Stamford; Mr. Ricker, St. Petersburg; Dr. Arsdale; Mr. Harding, Westgate-on-Sea; Mrs. Harris, Leeds; Mr. Maclachlan, Oban; Messrs. Potha and Co., London; Mr. Jones, Conway; Mr. Mason, Highbury; Dr. H. Smith, London; Mr. Cur.ice, Devonport; Mr. Pedley, Camberwell; Mrs. Rawlins, Westgate-on-Sea; Mr. Jarman, Rhayader; Mr. Boyd, Bayswater; Dr. Silvester, Clapham Common; Mr. Jackson, Bradford; Mr. Seymour, Coventry; Mr. O'Brien; Mr. Jennings, Colford; Messrs. Thomson and Son, Finsbury; Mr. Cox, Colchester; Mr. Gill, Douglas; Mr. Richardson, Birkenhead; Mr. Alden, Shirley; Mr. H. Shore, London; Dr. Herbert, Whitby; Messrs. Mackay, Edinburgh; Mrs. James, St. John's-wood; Mr. Holman, Keighley; Mr. Tumner, Harrogate; Mr. Da Silva, Bhowngar; Mr. Knightley; Mr. Donston, Tottenham; Mr. Barber, Kidderminster; Mr. Elliott; Dr. Fulton, Canada; Dr. Hayward, Whitstable; Mr. Ireland, Portsmouth; Mr. Robertson, Edinburgh; Mr. Clarke, Whitchurch; Dr. Arkins, Toronto; Messrs. Dawson Bros., Montreal; Dr. Young, Glasgow; Mr. Watson, Ludlow; Dr. Norman Kerr, London; M.D., Liverpool; Morphia; H. B. C., Bristol; L.R.C.P., Notts.; R., Swansea; R. F. G., Whitby; Medicus, Stonehouse; H. M. B., Southport; X. Y. Z., Wimbledon; Medicus, Birmingham; B. A. Y.; F.S.A., Wye; M.D., Belgravia; M.D., West Brompton; L.R.C.P., Manchester; F. H., Windermere; M.B.; L. R. H.; Hakim; R. S. T. Salford; Omega; Zeta; Superintendent, Cambridge; B.M.; A. B.

New York Daily Tribune, Times of India, The Rock, Oldham Standard, South American Journal, &c., have been received.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6	Six Months	£0 16 3
To CHINA AND INDIA		One Year	1 16 10
To THE COLONIES AND UNITED STATES		Ditto	1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications	£0	5	0
Official and General Announcements	0	5	0
Trade and Miscellaneous Advertisements	0	4	6
Seven lines and under (each averaging ten words).			
Every additional Line	0	0	6
Front Page per Line	0	1	0
Quarter Page	1	10	0
Half a Page	2	15	0
An entire Page	5	5	0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.